



Durham, Maine

**Conditional Use, Site Plan Review, and Floodplain
Management Permit Applications**

**Transmission Line Section 62 Rebuild
and Transmission Line Section 64 Rerate**

February 16, 2024



February 16, 2024

Mr. George Thebarge
Town Planner
Town of Durham
630 Hallowell Road
Durham, ME 04222

**RE: CMP Transmission Line Section 62 Rebuild and Section 64 Rerate
Conditional Use, Site Plan Review, and Floodplain Management Application for
Permit**

Dear Mr. Thebarge and members of the Planning Board:

Enclosed are ten printed copies and one digital PDF of the Application for Permits under the Town of Durham's Conditional Use, Site Plan Review, and Floodplain Management Ordinances for Central Maine Power Company's (CMP's) Section 62 Transmission Line Rebuild and Section 64 Transmission Line Rerate Project (the Project) that is partially located in Durham. As we confirmed with you via email in November 2023, while CMP is not directly applying for a shoreland zoning permit, the application describes the Project's conformity with Article 9, Sections 9.11 and 9.13(G), per Section 7.4 B. of the Conditional Use Ordinance. The application also describes the Project's conformity with Article 5 Performance Standards of the Land Use Ordinance.

The Project is related to, but separate from, the New England Clean Energy Connect (NECEC) project, as it is required for interconnection of the NECEC to the existing New England transmission system in accordance with requirements of the Tariff of ISO-New England (ISO-NE).

As we confirmed with you via email in December 2023, because of the size, scope, and linear nature of the Project and the applicability of the requirements of the Site Plan Review Ordinance to the Project, CMP is requesting four waivers or relaxation of certain submission requirements that are set forth in the waiver request included as Attachment 1 to this letter.

I will bring a \$3,500 check to the first Planning Board Meeting to cover the application fees. An Escrow account totaling \$16,250 for the Town of Durham to fund technical peer review is expected to be in place in the next several days and before the first Planning Board meeting. CMP requests to be placed on the next Planning Board agenda for consideration of the enclosed application.



If you have any questions regarding the application materials, or require additional information, please contact me at (603) 988-1007 or sfrice@burnsmcd.com.

Sincerely,

A handwritten signature in black ink that reads "Samuel F. Rice". The signature is written in a cursive style with a large, looping 'S' at the beginning.

Samuel F. Rice
Staff Environmental Scientist
Burns & McDonnell

Enclosures

cc: Gerry J. Mirabile/CMP

File: Durham Application



ATTACHMENT 1: SITE PLAN REVIEW WAIVER REQUESTS



Site Plan Review Waiver Requests

Because of the size, scope and linear nature of the Project and the applicability of the requirements of Durham's Site Plan Review Ordinance to the Project, CMP respectfully requests 4 waivers or relaxation of certain submission requirements to accommodate this transmission line proposal pursuant to Section 8.7 of the Town of Durham Site Plan Review Ordinance. These waivers are outlined and justified below.

1. Map Scale

CMP is requesting a waiver from the ordinance requirement in Section 8.5 (C) that the map utilize a scale of not more than 100 feet to one inch. CMP requests that the Board authorize a scale of 200 feet to one inch, as on the maps in Exhibit 4, because the scale of the Project is of such magnitude as to make a larger scale map unnecessary and cumbersome. Because of the length and scale of the Project in Durham, this smaller scale makes it easier to navigate the map book, while still depicting all of the necessary information.

Therefore, CMP requests a relaxation of the terms of this ordinance related to the map scale requirement because the proposed scale of 200 feet to one inch will substantially secure the objectives of the requirements if so waived, the public health, safety, and welfare will still be protected, and this waiver will not nullify the intent or purpose of the Comprehensive Plan or the Site Plan Review Ordinance, and the performance standards of the Site Plan Review Ordinance will be met.

2. Development Plan be Certified by a Professional Land Surveyor

CMP is requesting a waiver from the ordinance requirement in Section 8.5 (C)(4) of the Site Plan Review Ordinance that the Development Plan be certified by a professional land surveyor. A formal boundary survey is unnecessary for the Project in Durham, please see the response to Section 8.5 (C)(4) of the Site Plan Review Ordinance, provided in waiver request directly below, for further explanation.

3. Formal Boundary Survey

A formal boundary survey is unnecessary. Existing information from the Town of Durham's Assessors Maps and CMP's source deeds in Exhibit 3 was referenced to demonstrate CMP's ownership. The rebuilt transmission centerline, pole locations were determined relative to the position of the existing transmission centerline (Section 64). Prior to construction activities, the centerline will be surveyed, and these locations will be clearly marked with grade stakes and/or flagging in the field. As shown on the cross sections and on the detailed maps (Exhibits 4 and 5), the upgraded transmission lines will occur in the center of the 400-foot-wide property. There will be no possibility of encroaching on abutting property boundaries, and thus sufficient information is available to establish, on the ground, all property boundaries without a formal survey. Further, a



monumented perimeter survey would require an excessive amount of time and resources unnecessary to secure the objectives of the Ordinance. CMP therefore request a waiver from this requirement, as the actions to identify the transmission line location described above meet the performance standards of the Ordinance; the public health, safety, and welfare will be protected; and the waiver would not nullify the intent and purpose of the Comprehensive Plan or this Ordinance, and the performance standards of the Site Plan Review Ordinance will be met.

4. Signature Space

Section 8.5 (C)(24) of the Site Plan Review Ordinance requires that “*space must be reserved on the plan drawing for the signatures of the Planning Board and date together with the words, “Approved: Town of Durham Planning Board.”*”

In lieu of this requirement, CMP requests a waiver and proposes to provide a draft Findings of Fact decision document for the Planning Board prior to the Public Hearing. A space will be provided on that document for signatures of the Planning Board and date, together with the following words “*Approved: Town of Durham Planning Board.*”

Therefore, CMP requests a relaxation of the terms of this ordinance related to this requirement because the alternative proposal will substantially secure the objectives of the requirements if so waived, the public health, safety, and welfare will still be protected, and this waiver will not nullify the intent or purpose of the Comprehensive Plan or the Site Plan Review Ordinance, and the performance standards of the Site Plan Review Ordinance will be met.

Conditional Use, Site Plan Review, and Floodplain Management Permit Applications

Submitted to

Durham, Maine

Prepared for

Central Maine Power Company

**New England Clean Energy Connect
83 Edison Drive, Augusta, Maine 04336**

February 16, 2024

prepared by

**Burns & McDonnell Engineering Company, Inc.
Portland, Maine**

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1.0 INTRODUCTION

Central Maine Power Company (“CMP”) proposes to rerate existing 115 kV transmission line Section 64 and to rebuild existing 115 kV transmission line Section 62 (“the Project”). The Project is related to, but separate from, the New England Clean Energy Connect (“NECEC”) project. As discussed in Section 2.1 below, the Project is required for interconnection of the NECEC to the existing New England transmission system in accordance with requirements of the Tariff of ISO-New England Inc (“ISO-NE”).

A portion of the Project passes through Durham, including through shoreland zones. The Project is an “Essential Service” under the Town of Durham’s Land Use Ordinance (updated April 1, 2023) which includes the Shoreland Zoning Ordinance. “Essential Services” such as the Project are an allowed use without Planning Board review and approval in all Rural, Residential & Agricultural and Resource Protection land use districts, according to the table of land uses (Table 3.1) in Article 3, Section 3.1 of the Land Use Ordinance. Table 3.1 also indicates that “Other essential services” are allowed in all shoreland zones upon the review and approval of Conditional Use Permit applications to the Planning Board, which are reviewed in accordance with the Conditional Use criteria in Article 7, Section 7.4 of the Land Use Ordinance. While a shoreland permit is not required for the Project, the application describes the Project’s conformity with Article 9, Sections 9.11 and 9.13(G), per Section 7.4 B. of the Conditional Use Ordinance. Conditional Use approval is required only for the portions of the Project within the shoreland overlay zones, but the included application materials address all portions of the Project in Durham.

Article 18, Section 18.2 of the Land Use Ordinance states that a building permit is required for the Project. Article 8, Section 8.2 of the Land Use Ordinance necessitates Site Plan Review due to the fact the Project requires a building permit. The application also describes the Project’s conformity with Article 5 Performance Standards of the Durham Land Use Ordinance. Completed application forms for the Site Plan Review and Conditional Use Permit Applications are attached as Exhibit 1.

The Project also crosses three areas designated as Federal Emergency Management Agency (“FEMA”) Flood Zones. CMP accordingly submits the attached application for approval from the Code Enforcement Officer (“CEO”) and review by the Planning Board under the Town’s Floodplain Management Ordinance.

All necessary permits have been obtained from those federal, state, and municipal government agencies from which prior approval is required. Project approvals were granted by the Maine Public Utilities Commission (“MPUC”) on May 3, 2019 (issuing a Certification of Public Convenience and Necessity), the Maine Department of Environmental Protection (“MDEP”) on May 11, 2020 (issuing Site Law and Natural Resources Protection Act permits and Water

Quality Certification, which were affirmed by the Maine Board of Environmental Protection on July 21, 2022), and the United States Army Corps of Engineers (“USACE”) on November 6, 2020 (issuing a permit under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act).

Since these approvals, the Project design has been refined and modified as required by ISO-NE to increase the thermal capacity of these transmission lines and minimize environmental impacts. These design changes are necessitated by ISO-NE Interconnection Agreement ISO-NE-QP889. CMP has submitted a minor permit revision for these changes to the MDEP and USACE on December 19, 2023. The refinements and modifications are included in the design proposed in this application. No construction in Durham will occur prior to approvals of the minor permit revision by the MDEP and USACE.

2.0 PROJECT OVERVIEW AND DESCRIPTION

2.1 Project Overview

CMP proposes to construct the following transmission facilities in Durham:

- Rebuild of the existing 115 kV alternating current (AC) transmission line Section 62, which spans approximately 4.53 miles in Durham.
- Rerate¹ of the existing 115 kV AC transmission line Section 64 which spans approximately 4.50 miles in Durham.

These proposed transmission line upgrades are necessary to allow the interconnection of the NECEC to the existing New England transmission system in accordance with the terms of the ISO-NE Tariff and the terms of the Electric Transmission Upgrade Interconnection Agreement ISO-NE-QP889 by and among ISO-NE, NECEC Transmission LLC, and Central Maine Power Company, dated June 5, 2023.

The MPUC also has determined that the interconnection of the NECEC is in the public interest. The Project will ensure the reliability of the New England transmission system and provide significant benefits to Maine electric customers. In particular, the proposed transmission line upgrades will improve the flow of high voltage electricity across the entire transmission system in Maine, particularly in the event of outages to existing transmission facilities, thereby reducing transmission losses, and will help facilitate the interconnection of additional renewable generation resources in northern and eastern Maine.

¹ A “rerate” entails replacing select poles and associated pole components and hardware of the same configuration and in the same location.

2.2 Project Description in Durham

The proposed rebuild of existing transmission line Section 62 and rerate of existing transmission line Section 64 extend for approximately 4.53 and 4.50 miles, respectively, from Auburn southerly to Pownal (see Figure 2-2 below). The portion of the Project in Durham is on land that CMP owns in fee, within an existing transmission line corridor that traverses largely forested land with areas of agriculture. See Exhibit 3 for proof of title, right, or interest. The Project scope and natural resource maps are included as Exhibit 4, and the existing and proposed transmission line configuration cross sections are included as Exhibit 5.

The Project includes replacing 49 poles in Section 62 and 16 poles in Section 64 with an average transmission line pole height of approximately 71 feet within the existing corridor. Forty-eight (48) of the pole locations in Durham will involve installation of wood tangent poles (*i.e.* single poles) that will be “direct embedded” into the ground (*i.e.*, with no foundations), 16 of the of the pole locations will consist of two wood poles which will be direct embedded into the ground, and one pole location will consist of three poles direct embedded into the ground.

The existing CMP corridor will not require widening to accommodate the rebuilt transmission lines. There will be approximately seven square feet of disturbance at each single pole location, approximately 14 square feet of permanent disturbance at each double pole location, and 21 square feet of permanent disturbance at the one three-pole location. Two single poles and two double poles will be installed in wetlands, resulting in approximately 91.47 square feet of permanent disturbance.

Prior to construction activities, CMP will establish temporary access points from public or private roadways to enable access for pole removal, installation, and maintenance. Timber mats will be used to cross wetlands and to fully span streams in order to protect these natural resources. No in-stream work is proposed. All temporary access points and temporary preparation areas will be restored to pre-construction conditions during project restoration.

CMP has developed procedures to avoid and minimize adverse environmental impacts during construction and ongoing operation and maintenance of transmission lines. These procedures (implemented as part of all CMP transmission line and substation projects) were developed in consultation with the MDEP. As these procedures demonstrate, the Project meets the applicable approval standards in Durham. The following plans and procedures, which CMP developed for construction of the NECEC and which will be used in the Project, are attached hereto as exhibits:

- *Post Construction Vegetation Maintenance Plan* (“Vegetation Maintenance Plan” or “VMP”) (Exhibit 6)

The VMP includes strict performance standards to prepare the corridor for construction activities and for long-term maintenance of the transmission corridor in an early successional (scrub/shrub) habitat condition.

- *Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects* (“Environmental Guidelines”) (Exhibit 7).

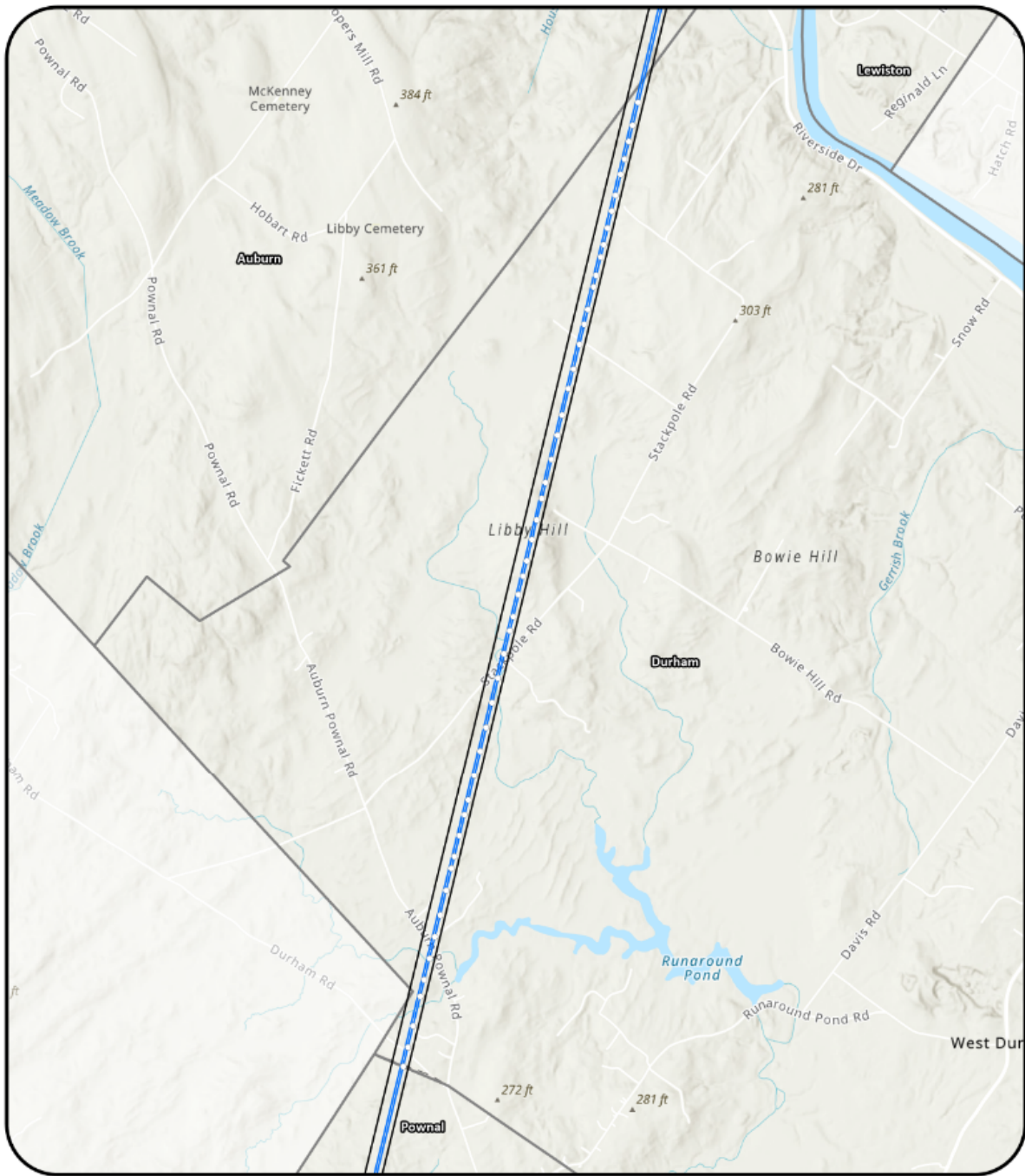
These guidelines are based on MDEP’s Maine Erosion and Sediment Control Best Management Practices (“BMPs”) and MDEP’s Chapter 500 rules and contain specific BMPs appropriate for electric transmission line and substation construction.

- *CMP’s Environmental Control Requirements for CMP Contractors and Subcontractors - Oil and Hazardous Material and Waste* (“Environmental Control Requirements”) (Exhibit 8).

This Environmental Control Requirements contingency plan establishes a set of minimum requirements for spill prevention and response and has proven to be effective.

Also, during the MPUC’s CPCN proceedings CMP committed to outreach and communications regarding fire and medical support related to the construction and operation of the Project. Upon request, CMP will review fire and medical support issues in meetings with the Durham CEO and planning officials and will provide training to municipal emergency personnel on how to respond to and safely manage situations associated with electric high voltage facilities. Actions that might require municipal emergency personnel would be no different for the proposed Project than for the existing CMP electric transmission facilities in Durham.

Figure 2-1: Map of Transmission Line Sections 62 and 64 in Durham



Legend

- Proposed Structure
- Project Centerline
- CMP Ownership

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham
Application
Overview



1/29/2024

3.0 PERFORMANCE STANDARDS

The following narrative describes the Project's conformity with Article 5 Performance Standards of the Durham Land Use Ordinance (updated April 1, 2023). The following materials address all portions of the Project in Durham.

Performance Standards

5.1 Accessory Apartments

Not applicable.

5.2 Access Management

Not applicable. Pursuant to the Land Use Ordinance, Section 5.2 "applies to new driveway and commercial entrances onto Town Roads." Because the land use associated with the Project is an "essential service" and is not "commercial," as those terms are defined in Article 19, and does not involve new driveways, this performance standard is inapplicable. Furthermore, there will be no new permanent roads or driveways associated with the Project in Durham, and the Project will have no unreasonable negative impact on the Town's road system. In areas where access does not already exist, CMP will establish temporary corridor access points for equipment access to the corridor for construction. These temporary access ways do not meet the definition of a "road" in Article 19, which is defined as "a route or track consisting of a bed of exposed mineral soil, gravel, asphalt, flood or other surfacing material constructed for or created by the repeated passage of motorized vehicles." The short-term, temporary use of these access routes does not constitute repeated use. These temporary access ways will be in place for less than 18 months, and the landscape will be restored to its original contours and revegetated. These temporary access points also do not fall within the Ordinance's definition of "driveways," because they are temporary and do not serve single-family dwellings. Accordingly, the Section 5.2 performance standard is inapplicable. Nevertheless, for the Planning Board's information, CMP provides the following safety information.

An adequate number of access points will be determined in locations that provide safe access with respect to sight distances, and intersections, schools, or other applicable traffic generators. All temporary access points will meet Maine Department of Transportation ("MDOT") *Highway Driveway and Entrance Rules* as specified in Title 17 Chapter 299. During operation of the transmission line, CMP will utilize access points similar to those currently used for occasional routine and emergency transmission line operation, maintenance and repair. This use will not cause unreasonable highway or public road congestion. No curb cuts are proposed.

During the construction phase, some material and equipment deliveries may require vehicles to stop on or back into a street. During these infrequent occasions, spotters or flaggers will be used to assist vehicles into or out of the corridor. Any temporary access way or temporary access way lane will be designed in profile and grading and be located to allow at least the minimum sight distance measured in each direction consistent with the Town's ordinances.

Within the RP and LR districts, temporary access will be minimized to the extent practicable and will only be used to access the pole locations. These temporary access points also do not fall within the Ordinance's definition of "driveways," because they are temporary and because they do not serve two-family dwellings.

CMP's Environmental Guidelines (Exhibit 7) contain requirements and best practices regarding installation of temporary access points. Consistent with these guidelines, measures will be taken to avoid and minimize impacts to streams and wetlands through the use of timber mats, temporary bridges, geo-textile fabrics, and culverts, when necessary. Please see response to 5.11 for Erosion Control within this narrative. After construction has been completed, disturbed areas associated with temporary access roads will be returned to preconstruction contours, reseeded as needed, and stabilized. The transmission corridor will be permanently maintained in a scrub-shrub condition.

If necessary, timber mats will be placed parallel to the upland edge of streams as abutments to further protect bank stability. No grubbing (removal of root systems) within wetland crossing areas will be done prior to mat placement. However, some minor grading may be required to ensure mat stability and construction access safety. Any such grading will be limited. Streams that are too wide to cross with timber mats or temporary bridges will be avoided and the Project will utilize alternate access to transmission pole locations.

5.3 Agriculture

Not applicable.

5.4 Air Emissions

The Project will not cause air pollution, and no degradation of air quality will result from the Project. Minor air emissions will result from construction-related activities, such as exhaust from diesel engines, but will be limited in duration and given the generally rural nature of the site, Section 5.4 criteria will be met. In other words, there will be no emission of dust, ash, smoke or other particulate matter, or of gases and chemicals, which can cause damage to human or animal health, vegetation, or property by reason of concentration or toxicity, which can cause soiling beyond the property boundaries, or which fail to meet or cannot meet the air emission standards set by the MDEP. All activities will also comply with applicable federal and state regulations.

5.5 Animal Husbandry

Not applicable.

5.6 Automobile Graveyard & Junkyard

Not applicable.

5.7 Back Lots

Not applicable.

5.8 Campgrounds

Not applicable.

5.9 Cemeteries

Not applicable.

5.10 Construction & Plumbing Standards

All construction will be in accordance with CMP's transmission standards, general industry standards, and good utility practices including all necessary live line working clearances, strength factors, and reliability factors that are governed by the National Electrical Safety Code ("NESC"). In all instances, these transmission line has been designed to meet or exceed the NESC and other applicable standards. The transmission lines and all facilities will be operated in full compliance with CMP safety standards, which fully comply with federal Occupational Safety & Health Administration requirements.

5.11 Erosion Control

CMP's Environmental Guidelines, which are used as a routine part of all transmission and substation projects, contain erosion and sedimentation control requirements, standards, and methods that will protect soil and water resources during construction of the various Project components. The manual was developed in consultation with the MDEP and is based on MDEP's Maine Erosion and Sediment Control BMPs and MDEP's Chapter 500 rules. It contains specific BMPs appropriate for electric transmission line construction. These guidelines will be followed in the rebuild and rerate of these transmission lines in Durham and are consistent with the requirements of the Shoreland Zoning Ordinance, as well as Section 5.11(A)-(D), see responses below. CMP's Environmental Guidelines will serve as the soil erosion and sedimentation control plan to be submitted for approval per Article 9 Section 9.11(R)(1).

Accordingly, any stripping of vegetation, removal of soil, regrading or other development associated with the Project such as installation of temporary access roads or pole placement will limit the duration of exposure and area of the site disturbed to the maximum extent practicable. Dust control methods will be employed during dry conditions.

Temporary vegetation, mulching, and/or siltation fabrics will be used to protect critical areas (as defined by this standard) during the Project. Sedimentation of runoff will be trapped by debris basins, silt traps, sediment basins or other effective methods certified as acceptable by a registered soil scientist or registered professional engineer.

Upon completion of the project, all disturbed areas will be permanently revegetated or otherwise permanently stabilized. This includes the restoration of all areas disturbed by pole installation, temporary access roadways, construction, and resource crossings. Restoration is generally assumed to be a well-established vegetative cover. All cut and fill slopes will be revegetated, stabilized with riprap, or stabilized with erosion control mix, as appropriate to the slope conditions. Permanent water bars will be constructed to a sufficient height and width to divert the amount of water anticipated at each location as well as to provide stability to the site. Water bars on long-term temporary access roads will be constructed in such a manner that they will remain effective and require minimal maintenance, and will be permanently seeded to ensure their long-term stability. Accordingly, permanent vegetation and/or other erosion control measures will be

installed prior to completion of construction, but no later than six months after completion of construction.

In limited circumstances, minor grading within 10 feet of a property line may be required in order to accommodate temporary access roads which will be restored at the end of the Project. This grading should not be considered “cut or fill.” The Project is not expected to require cut or fill closer than ten (10’) feet to a property line. If cut or fill is necessary, it will only occur after it is mutually agreed to by the affected landowner and applicable Town Board or official granting the permit in question but in no instance will any cut or fill exceed a three to one (3:1) slope.

5.12 Explosive Materials

Not applicable.

5.13 Groundwater Extraction

Not applicable.

5.14 Historic Resources

CMP has conducted extensive pre-historic archaeological, historic archaeological, and historic architectural investigations and surveys along the Project route, for State purposes under Chapter 375.11 of the MDEP rules and for federal action under Section 106 of the National Historic Preservation Act (“NHPA”) (16 U.S.C § 470f). CMP has consulted with the Maine Historic Preservation Commission (“MHPC”) throughout the state and federal permit application development and approval process.

These surveys identified one site in Durham that is eligible for NHPA recommendation; however, this site will be avoided by construction activity; temporary construction fencing to prohibit disturbance of the site will be installed prior to construction activities. As specified in the Historic Properties Memorandum of Agreement (“MOA”) among CMP, MHPC, USDOE, United States Department of the Interior – National Park Service, and the USACE, the USACE determined and the MHPC concurred that with implementation of such fencing there would be no adverse effect on this site (Exhibit 12).

No stone walls or granite posts, abutments or markers older than one hundred (100) years of age will be torn down, no cemetery or grave marker will be disturbed, no archeological site identified by the Maine Historic Preservation Commission will be disturbed, no structure listed on the National Register of Historic places will be torn down or its exterior facade altered, no churches or school buildings older than one hundred (100) years of age will be torn down or altered except to restore them in accordance with their original design, and no structures will be remodeled as part of the Project.

5.15 Homebased Business

Not applicable.

5.16 Landscaping

The transmission line corridor will be revegetated through natural recruitment to a scrub-shrub habitat as required by the VMP (Exhibit 6) and Environmental Guidelines (Exhibit 7). CMP will maintain a forested buffer along the western extent of the Project that provides landscaping that screens views of the Project. Where the existing transmission lines are visible from nearby locations, including where the Project crosses open agricultural areas, no additional landscaping is proposed because it would not be practical or effective given the existing state of the landscape. Because the Project will be located within an existing corridor and adjacent to another existing transmission line, it will not adversely affect the scenic quality of the adjoining neighborhoods nor encroach on abutting land uses and the landscape will be preserved in its natural state to the maximum extent possible.

5.17 Lighting

Not applicable. There will be no lighting associated with operation of the Project in Durham.

5.18 Manufactured Housing & Mobile Homes

Not applicable.

5.19 Noise Limits

The rebuilt and re-rated transmission lines will not create any noise that is different from present conditions. Nevertheless, as part of the state permitting of the NECEC Project, CMP evaluated transmission line noise in a sound study, which demonstrates that the Project in Durham will be below the Section 5.19 noise limits. This sound study determined that, at the worst-cast (closest) distance the 345 kV transmission line could be to the edge of the NECEC right-of-way (75 feet), sound generated by the 345 kV transmission line under foul weather conditions would be approximately 41 dBA. While intermittent louder levels of audible noise could occur during foul weather, these would be masked by the background noise caused by rain and wind.

The worst-cast (closest) distance this Project's 115kV transmission lines are located to the edge of the right-of-way is approximately 123.5 feet. Therefore, during the same weather conditions, and because 115kV transmission lines generate less noise than 345 kV transmission lines, the Project will create less than 41 dBA of noise, which is less than the 45 dBA at the property boundary required by this standard.

The Project further will comply with the prohibition on construction activities between 9 p.m. and 6:30 a.m.

5.20 Odor Emissions

Minor temporary odor emissions as a result of construction-related activities, such as exhaust from diesel engines, may occur. Given the limited duration of construction activities and the generally rural nature of the site, any influences on overall odor emissions will be insignificant in Durham. Accordingly, the Project will not cause or allow the emission of odorous air contaminants from any source that would result in detectable odors at the lot line of the source in

excess of the limits set forth in Section 5.20. All activities will also comply with applicable federal and state regulations.

5.21 Recreational Facilities

Not applicable.

5.22 Restaurants, Food Service, Take Out Stands

Not applicable.

5.23 Roads

Not applicable. No new permanent roads or driveway entrances are proposed in Durham. See response to Section 5.2 above.

5.24 Signage

Not applicable. There are no signs proposed as part of the Project in Durham.

5.25 Storage of Materials

There will be short-term storage in upland areas of wooden poles, wire, and other hardware to be used for the rebuild and rerate of these transmission lines. Materials will be neatly organized and stored so as to not harbor vermin, and to prevent stagnation of water. All materials stored outdoors will be stored in such a manner as to prevent the breeding and harboring of insects, rats, or other vermin. Only materials used for construction in the immediate area will be stored in these areas.

5.26 Storage of Hazardous Materials

Not applicable. The Project does not include hazardous materials outdoor storage facilities or underground petroleum storage.

5.27 Temporary Activity

Note applicable.

5.28 Temporary Structures

Not applicable.

5.29 Vibrations

During the normal operation of the transmission lines there will be no vibrations at or beyond lot lines.

5.30 Water Quality Impacts

The Project will not deposit on or into the ground or discharge any pollutant to the waters of the State. To protect water quality and minimize spill potential during construction, no fueling or maintenance of vehicles will be performed within 100 feet of wetlands, streams, or other sensitive or protected natural resources, unless done on a paved road. As described in the VMP (Exhibit 6), CMP uses and will continue to use a selective herbicide program to treat areas once every four years to maintain early successional scrub shrub growth. Herbicide will be selectively applied (using a low-pressure backpack-mounted applicator) to individual capable specimens to

prevent growth (or re-growth of a cut plant) of individual plants. Herbicides will not be used within 100-foot riparian buffers

The multiple methods, plans, and procedures to prevent water quality degradation during construction, operation, and maintenance of the Project are incorporated into the Environmental Control Requirements (Exhibit 8), VMP (Exhibit 6), and Environmental Guidelines (Exhibit 7).

Accordingly, the Project will not locate, store, discharge, or permit the discharge of any treated, untreated or inadequately treated liquid, gaseous, or solid materials of such nature, quality, obnoxiousness, toxicity, or temperature that run-off may seep, percolate, or wash into surface or groundwaters so as to contaminate, pollute, or harm such waters or cause nuisances, such as objectionable shore deposits, floating or submerged debris, oil or scum, color, odor, taste, or unsightliness, or be harmful to human, animal, plant, or aquatic life. The Project does not include a holding tank and as a result does not require a holding tank application.

4.0 CONDITIONAL USE PERMIT APPLICATION

The Conditional Use Application is attached as part of Exhibit 1. The following narrative describes the Project's conformity with Article 7, Section 7.4 Conditional Use Review Criteria of the Durham Land Use Ordinance (updated April 1, 2023). Conditional Use approval is required only for the portions of the Project within the shoreland overlay zones, but the following materials address all portions of the Project in Durham.

Conditional Use Review Criteria

A. Review Criteria

- 1. Public Health Impacts:** *The proposed use will not create unsanitary or unhealthful conditions by reason of sewage disposal, emissions to the air or water, or other aspects of its design or operation:*

The Project will maintain the same safe and healthful conditions that currently exist in the transmission line corridor. The infrastructure and equipment in the transmission line corridor is regularly maintained to established industry standards to ensure the safety of utility workers and the general public.

Maintaining sufficient clearances around the conductors is paramount to the safe and reliable operation of the transmission lines. These clearances are achieved through appropriate siting of the poles themselves and through the vegetation maintenance practices described above. All construction will be in accordance with CMP's transmission standards, general industry standards, and good utility practices including all necessary live line working clearances, strength factors, and reliability factors as governed by the NESC. In all instances, the line has been designed to meet or exceed the NESC and other applicable standards. The transmission line and all facilities will be operated in full compliance with CMP safety standards, which fully comply with federal Occupational Safety & Health Administration requirements.

The Project will not result in unsanitary or unhealthful conditions due to sewage disposal or emissions to the air or water, or other aspects of Project design. The Project has received a permit from the USACE authorizing construction of the Project pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, and Site Location of Development Act and Natural Resources Protection Act permits and Section 401 Water Quality Certification from the MDEP. As demonstrated by the approvals of these agencies, the Project has been designed to meet or exceed compliance with all applicable laws, ordinances, codes, and regulations with respect to air and water quality. CMP has carefully designed the Project to minimize impacts on water quality. Sewage disposal is not part of the Project in the Town of Durham.

No degradation of air quality will result from the Project. Minor temporary influences on air quality as a result of construction related activities, such as exhaust from diesel

engines, may occur. Given the limited duration of activities at the location and the generally rural nature of the site, any influences on overall air quality will be insignificant.

2. Traffic Safety Impacts: *The proposed use will not create unsafe vehicular or pedestrian traffic conditions when added to existing and foreseeable traffic in its vicinity:*

The Project will not create unsafe vehicular or pedestrian traffic conditions when added to existing and foreseeable traffic in its vicinity. No new permanent roads or driveway entrances are proposed in Durham. Prior to construction activities, CMP will establish temporary access points from public or private roadways in areas where access does not currently exist. An adequate number of access points will be determined in locations that provide safe access with respect to sight distances, intersections, schools, and other applicable traffic generators. All temporary access points will meet MDOT *Highway Driveway and Entrance Rules* as specified in Title 17 Chapter 299. Post-construction, CMP will utilize the currently existing roads that enable CMP to access the corridor for occasional routine and emergency transmission line maintenance and repair. This continued use will not cause additional highway or public road congestion.

During the construction phase, some material and equipment deliveries may require vehicles to stop on or back into a street right-of-way. During these infrequent occasions, spotters or flaggers will be used to assist vehicles into or out of the corridor.

3. Public Safety Impacts: *The proposed use will not create public safety problems which would be substantially different from those created by existing uses in the neighborhood or require a substantially greater degree of municipal services than existing uses in the neighborhood:*

The Project will not create public safety problems which would be substantially different from those created by existing uses in the neighborhoods or require a substantially greater degree of municipal services than existing uses in the neighborhoods the Project crosses. The Project is located within the existing CMP transmission line corridor and is consistent with existing uses.

4. Environmental Impacts: *The proposed use will not result in sedimentation or erosion, or have an adverse effect on water supplies:*

The Project will not result in sedimentation or erosion or have an adverse effect on water supplies. CMP's Environmental Guidelines (Exhibit 7) will be applied to minimize soil disturbance and to protect water quality. See also the response to Section 7.4(A)(1) for additional information.

5. Scale & Intensity of Use: *The proposed use will be compatible with existing uses in the neighborhood, with respect to physical size, visual impact, intensity of use, and proximity to other structures:*

The Project, which occurs within the existing CMP transmission line corridor, is a rebuild and a rerate of existing transmission lines and therefore is not only compatible, but is identical to existing uses. Accordingly, it exceeds this standard with regard to existing uses in the neighborhoods the project crosses, with respect to physical size, visual impact, intensity of use and proximity to other structures.

6. Noise & Hours of Operation: *The proposed use will be compatible with existing uses in the neighborhood, with respect to the generation of noise and hours of operation:*

The rebuilt and re-rated transmission lines will not create any noise that is different from present conditions, and therefore will be compatible with existing uses in the neighborhood, with respect to the generation of noise and hours of operation. See responses to Sections 5.2 and 5.19 above for additional details concerning noise and hours of operation.

7. Right, Title, or Interest: *The applicant has sufficient right, title or interest in the site of the proposed use to be able to carry out the proposed use:*

The Project is located within the existing CMP transmission line corridor on land owned by CMP. See Exhibit 3 for proof of title, right, or interest.

8. Financial & Technical Ability: *The applicant has the financial and technical ability to meet the standards of this Section and to comply with any conditions imposed by the Planning Board pursuant to subsection 7.5:*

The Project is being funded as part of NECEC, which was selected as the winning bidder of the Massachusetts request for proposal, and will be fully funded by Massachusetts ratepayers. Not only has CMP secured funding for the Project, but CMP is an experienced and financially strong developer and operator of transmission facilities in Maine, with a proven record of delivering major transmission Projects on time, on budget, and in full compliance with all federal, state, and local statutes, regulations, and approvals. CMP is a subsidiary of AVANGRID, Inc., a leading sustainable energy company with approximately \$41 billion in assets and operations in 24 U.S. states. AVANGRID has two primary lines of business: Avangrid Networks and Avangrid Renewables. Avangrid Networks owns eight electric and natural gas utilities, serving 3.3 million customers in New York and New England. Please see Exhibit 9 for the Letter of Commitment to Fund from Michael Panichi, Vice President & Treasurer of AVANGRID, Inc., which is the parent company of CMP.

CMP has extensive experience in the design, construction, and operation of electric infrastructure projects and will utilize existing staff capabilities for this Project. CMP's delivery system includes 2,919 miles of overhead transmission lines and 23,734 miles of distribution lines, and 205 substations. To support the Project, CMP has engaged a team

of highly qualified and experienced engineers, permitting specialists, consultants, and contractors.

CMP will comply with any reasonable conditions imposed by the Planning Board pursuant to subsection 7.5.

B. Compliance with Land Use Ordinance Standards: *The proposed conditional use shall meet all applicable criteria and design or performance standards in all articles of the Land Use Ordinance:*

As evidenced by this permit application, with exception to certain circumstances where CMP has requested a waiver, CMP has met all applicable criteria and design or performance standards in all articles of the Town of Durham's Land Use Ordinance.

The following outlines and addresses all criteria and performance standards with respect to the Town of Durham Shoreland Zoning Ordinance. While a shoreland zoning permit is not required here, the following narrative describes the Project's conformity with Article 9, Sections 9.11 and 9.13(G), per Section 7.4 B. of the Town of Durham's Conditional Use Ordinance.

Shoreland Zoning Areas in the Project Area

According to the Town's Future Land Use Map (updated April 1, 2023) and corresponding Shoreland Zoning Ordinance, the transmission lines will continue to cross three Resource Protection (RP) districts and one Limited Residential (LR) in Durham. Three poles (62-52, 62-53 and 62-54) which already exist within the LR district will be replaced as part of the Section 62 rebuild and one existing pole (64-197) that will receive maintenance as part of the Section 64 rerate is located in the RP district of Libby Brook.

These shoreland districts are identified and described as follows:

1. *Resource Protection district at Runaround Brook (Exhibit 4, map 10)*
2. *Resource Protection district at an unnamed tributary to Runaround Brook (Exhibit 4, map 10)*
3. *Resource Protection district at Libby Brook (Exhibit 4, maps 6, 7, and 8)*
4. *Limited Residential district at an unnamed wetland (Exhibit 4, maps 3 and 4)*

Permitted Land Uses

According to Table 3.1 in Article 3, Section 3.1 of the Land use Ordinance, *Essential services* such as the Project are a permitted use in both the RP and LR districts with approval of the Planning Board. However, further restrictions apply as detailed in Section 9.11(K)(1):

The installation of essential services, other than road-side distribution lines is not allowed in a Resource Protection, except to provide services to a permitted use within

said district, or except where the applicant demonstrates that no reasonable alternative exists. Where allowed, such structures and facilities shall be located so as to minimize any adverse impacts on surrounding uses and resources including visual impacts.

Due to the linear nature of the Project, the extent of the RP district, and the desire to minimize impacts by locating the rebuilt and rerouted transmission lines within the existing right of way, the RP district could not be completely avoided, and no reasonable alternative exists. Further discussion is provided below.

Land Use Standards

The following section addresses the Land Use Standards in the Durham Shoreland Zoning Ordinance found in Section 9.11.

A. Minimum Lot Standards

Not applicable. The Project does not meet the use types requiring minimum lot standards set forth in Section 9.11(A)(1) and will not have structures, as defined in Article 19 of the Ordinance, as discussed below.

B. Principal and Accessory Structures

Not applicable. The transmission line poles are not “structures,” which, as defined in Article 19 of the Ordinance under “structure, shoreland zoning,” specifically excludes “poles, wiring and any other aerial equipment normally associated with service drops.” The transmission line poles fall within this exclusion. MDEP confirmed this interpretation in a June 8, 2020 letter (Exhibit 10). MDEP stated that the setback requirements in Article 19(B) do not apply to transmission lines, as they are exempt under the MDEP Guidelines for Municipal Shoreland Zoning Ordinances.

Further, the Ordinance defines “principal structure” as “any building or structure in which the main use of the premises take place.” The Ordinance defines “building” as “any structure having a roof supported by columns or walls and intended for shelter, housing, or enclosure of persons, animals, or chattel.” As explained above the definition of structure does not include transmission line poles. Because poles are not buildings and are not structures, they cannot be principal structures. Similarly, to be an accessory structure, the poles would have to be “incidental and subordinate to the principal building allowed in the district in which it is located and located on the same lot with such principal building.” Because there is no principal building on the lot, and because the poles are not subordinate to any other use, they are not accessory structures. The transmission line poles therefore are not *Principal Structures*, nor can they be *Accessory Structures* with no associated Principal Structure.

Even if electrical line poles were principal or accessory structures, the shoreline setback requirements in Section 9.11(A) do not apply because these transmission line project “structures” require direct access to the water body or wetland as an operational necessity, pursuant to Section 9.11(B)(2). That is, the Project poles must cross the water

body in order to achieve the project's purpose of transmitting electricity from the Larabee Road Substation (in Lewiston) to the Surowiec Substation (in Pownal).

C. Piers, Docks, Wharves, Bridges, and Other Structures and Uses Extending Over or Located Below the Normal High-Water Line of a Water Body or Within a Wetland; and Shoreline Stabilization:

As described above, transmission line poles are not "structures." There will be no in-stream work, and CMP will provide the riparian buffers described in the VMP (Exhibit 6) and implement its environmental protection requirements described in its Environmental Guidelines (Exhibit 7) and Environmental Control Requirements (Exhibit 8), such that impacts will be minimized.

The project does not require access from shore, will not interfere with existing developed or natural beach areas, is located to negate adverse effects on fisheries, and is no larger in dimension than necessary to carry out the activity. Because the Project is located in an existing transmission line corridor, it is consistent with the surrounding character and uses of the area. The Project does not include temporary or permanent piers, docks, wharfs, or structures. Because the Project does not include require access from a shoreline no shoreline stabilization of an eroding shoreline is required.

D. Campgrounds

Not applicable.

E. Parking Areas

Not applicable. There will be no parking areas associated with the Project.

F. Roads and Driveways

Not applicable. There will be no permanent roads or driveways associated with the Project in Durham. See Section 5.2 above.

G. Signs

Not applicable. There are no signs proposed as part of the Project in Durham.

H. Stormwater Runoff

The Project is designed to minimize stormwater runoff by deploying stormwater control methods described in the Environmental Guidelines (Exhibit 7). Temporary access roads and any construction activities will be carefully planned and designed to utilize existing natural runoff control features, such as upland vegetated buffers, and diversion and dissipation techniques such as water bars, check dams, or settling basins. Diversion and dissipation areas will be maintained as necessary to ensure proper functioning. Shrubby vegetation will be retained to the maximum extent practicable and soil exposure during construction will be minimized in both area and duration. After construction is complete, all areas will be returned to preconstruction contours, reseeded as needed, and allowed to revegetate to a scrub-shrub condition. The Project will not alter stormwater runoff from predevelopment conditions.

I. Septic Waste Disposal

Not applicable. There is no septic waste disposal associated with the Project.

J. Mineral Exploration and Extraction

Not applicable.

K. Essential Services

Where feasible, the installation of essential services shall be limited to existing public ways and existing service corridors.

Within Durham, the proposed transmission line upgrades (rebuild and rerate) will be located within CMP's existing transmission line corridor and will be built entirely on land that CMP owns. The existing transmission line corridor will not require widening to accommodate the upgraded transmission lines.

(1) The installation of essential services, other than road-side distribution lines, is not allowed in a Resource Protection, except to provide services to a permitted use within said district, or except where the applicant demonstrates that no reasonable alternative exists. Where allowed, such structures and facilities shall be located so as to minimize any adverse impacts on surrounding uses and resources, including visual impacts.

CMP's existing, maintained transmission line corridor crosses the RP and LR districts in Durham. Pole number 64-197, which is an existing pole that is partially located within the RP district of Libby Brook, will receive maintenance (installation of cross brace) as part of the Project. The Project will not be "installed" in the RP district associated with Runaround brook or the unnamed tributary to Runaround Brook but will simply pass overhead. CMP has minimized the impact of the transmission line upgrades by continuing to locate them within the existing corridor.

There is no reasonable alternative to this Essential Service passing over the RP district in Durham. Locating the transmission line upgrades within an existing transmission line corridor minimizes impacts on the surrounding uses and resources, including natural resources and visual impacts. The alternative to CMP's proposal would be to acquire additional land rights and site the transmission line in an entirely new corridor, which would not be a reasonable alternative because it would have greater impacts and CMP would likely be unable to avoid the district in any case. Within the corridor, CMP has sited each pole to avoid or minimize impacts on surrounding uses and protected natural resources to the greatest extent practicable and has compensated for impacts that cannot be avoided. The Project includes one pole location in the RP district associated with Libby Brook.

L. Agriculture Uses

Not applicable.

M. Timber Harvesting

Repealed.

N. Clearing or Removal of Vegetation for Activities Other Than Timber Harvesting

Not applicable. Clearing or removal of vegetation will not be required within the existing transmission line corridor to accommodate the Project, and the Project meets the exemption in Section 9.11(O). Nevertheless, for the Planning Board' information, CMP describes the maintenance activities that are occurring and will continue to occur during operation of the transmission line corridor. Transmission line corridor maintenance will continue to require the removal of "capable species," "dead trees," and "hazard trees." Maintenance practices are typically conducted on a four-year cycle depending on growth, weather, geographic location, and corridor width. Non-capable species are allowed to grow to ensure that the corridor is vegetated to the greatest extent allowable, which helps prevent erosion and provides wildlife habitat. Maintenance procedures will be to cut all capable species and any dead or hazard trees at ground level, primarily using hand tools, with the occasional use of chain saws and limited use of motorized equipment in areas directly accessible from public or private access routes. Large vegetation cut during routine maintenance will be managed in accordance with the Maine Slash Law (12 M.R.S. §§ 9331-9338). Selective herbicide application will be used in conjunction with mechanical methods of vegetation control. Vegetation clearing or removal will be conducted according to the procedures and restrictions in the VMP (Exhibit 6). The Project is exempt from the requirements set forth in Section 9.11(N), as per Section 9.11(O)(2) of this Ordinance, "The removal of vegetation from the location of allowed structures or allowed uses, when the shoreline setback requirements of Section 9.11(B) are not applicable." As explained in Section 9.11(B), the Project does not meet the definition of a *Principal Structure* or *Accessory Structure*.

O. Exemptions to Clearing or Removal of Vegetations other than Timber Harvesting

The Project meets the exemption of clearing and vegetation removal requirements in the Shoreland Zone as per Section 9.11(O)(2), "The clearing or removal of vegetation from the location of allowed structures or allowed uses, when the shoreline setback requirements of Section 15(B) are not applicable." As explained in Section 9.11(B), the Project does not meet the definition of a *Principal Structure* or *Accessory Structure*, therefore does not need to meet the standards set forth in 9.11(N).

P. Hazard Trees, Dead Trees and Storm-Damaged Trees

As described above, current transmission line corridor maintenance will continue on the rebuilt and rerouted lines. During such maintenance, hazard trees, storm damaged trees, and dead trees may be identified; those trees are typically on the edge of the transmission line corridor and are identified as hazard trees because they pose an imminent threat of violating the minimum separation standard or are at risk of falling onto and contacting the lines due to disease, unstable shape, or potential instability. Hazard trees are typically removed immediately upon identification. Removal of hazard, storm-damaged trees, and dead trees, where the stumps remain and no new cleared areas are created, will be

conducted only when necessary and is allowed in the shoreland zone without a permit after consultation with the CEO.

Q. Revegetation Requirements

Not applicable as per the exemption allowed in Section 9.11(O)(2). Nevertheless, CMP's best management practices comply with the requirements of the ordinance, as described in the VMP (Exhibit 6) and Environmental Guidelines (Exhibit 7). Restrictions on maintenance within the riparian buffers will allow a greater density of non-capable vegetation to remain and will avoid disturbance to the greatest extent practicable. Areas of soil disturbance will be stabilized and seeded with native seed mix.

R. Erosion and Sedimentation Control

CMP's Environmental Guidelines (Exhibit 7), which are used as a routine part of all transmission and substation projects, contain erosion and sedimentation control requirements, standards, and methods that will protect soil and water resources during construction of the various Project components. The manual was developed in consultation with the MDEP and is based on MDEP's Maine Erosion and Sediment Control BMPs and MDEP's Chapter 500 rules. It contains specific BMPs appropriate for electric transmission line construction. These guidelines will be followed in the construction of the transmission line in Durham and are consistent with the requirements of the Shoreland Zoning Ordinance. CMP's Environmental Guidelines will serve as the soil erosion and sedimentation control plan to be submitted for approval.

The Project will not result in soil erosion or sedimentation or adversely affect neighboring properties, downstream conditions, or public storm drainage. The Project has been designed to fit the existing topography and soils of the site and will retain and utilize natural contours as closely as possible to minimize soil exposure and the potential for erosion. Project activities will be sequenced to minimize exposed soils and will provide temporary stabilization during construction and permanent stabilization after construction is completed, consistent with the requirements of the ordinance. Any exposed ground area will be temporarily stabilized within one week from the time it was last actively worked by effective measures such as seed, mulch, or other affective measures and permanent stabilization will occur within nine months of the initial date of exposure. Natural and manmade drainage ways and drainage outlets will be protected from erosion from water flowing through them.

There will be no permanent conversion of vegetated areas to impervious surface other than the limited area around and including the transmission poles themselves, which are replacing existing poles. After construction is complete, all disturbed areas will be temporarily stabilized until permanent vegetative cover is achieved. The corridor is and will continue to be maintained as early successional scrub-shrub habitat. Vegetation will be maintained on a four-year cycle to ensure vegetation does not reach heights that threaten safety or the reliability of the transmission lines. Vegetation maintenance

procedures are described in the VMP (Exhibit 6). Heavy equipment will not be necessary for vegetation control and will be maintained by hand cutting and/or limited herbicide use, thereby minimizing the potential for soil disturbance.

In Durham, Jason Durant (MDEP #32677) is certified in erosion control practices by the Maine Department of Environmental Protection and will be responsible for management of erosion and sedimentation control practices. Jason or another certified erosion control specialist will be present at the site each day these activities occur for a duration that is sufficient to ensure that proper erosion and sedimentation control practices consistent with this standard are followed. Erosion and sedimentation control measures will stay in place until the area is sufficiently covered with vegetation necessary to prevent soil erosion has been completed.

S. Soil Analysis

Based on the Soil Survey Geographic Database compiled by the United States Department of Agriculture – Natural Resources Conservation Service, the Project will be located on soils in or upon which the proposed uses and transmission poles can be established and maintained without causing adverse environmental impacts, including severe erosion, mass soil movement, improper drainage, and water pollution, during and after construction. Soil constraints within the transmission line corridor will be managed and mitigated through implementation of erosion and sedimentation controls, proper siting and project design, and proper construction sequencing. A soils report for the transmission line components located in Durham is not required since the Project does not require subsurface waste disposal and is not an intensive land use.

T. Water Quality

The Project will not deposit on or into the ground or discharge any pollutant to the waters of the State. To protect water quality and minimize spill potential during construction, no fueling or maintenance of vehicles will be performed within 100 feet of wetlands, streams, or other protected or sensitive natural resources, unless done on a paved road. As described in the VMP (Exhibit 6), CMP uses and will continue to use a selective herbicide program to treat areas once every four years to maintain early successional scrub shrub growth. Herbicide will be selectively applied (using a low-pressure backpack-mounted applicator) to individual capable specimens to prevent growth (or re-growth of a cut plant) of individual plants. Herbicides will not be used within the 100-foot riparian buffers within the RP district at Runaround brook, an unnamed tributary to Runaround brook, and Libby brook.

The multiple methods, plans, and procedures to prevent water quality degradation during construction, operation, and maintenance of the NECEC are incorporated into the Environmental Control Requirements (Exhibit 8), VMP (Exhibit 6), and Environmental Guidelines (Exhibit 7).

U. Archaeological Sites

CMP has conducted extensive potential pre-historic archaeological, historic archaeological, and historic architectural investigations and surveys along the Project route, for State purposes under Chapter 375.11 of the MDEP rules and for federal action under Section 106 of the National Historic Preservation Act (“NHPA”) (16 U.S.C § 470f). CMP has consulted with the MHPC throughout the state and federal permit application development and approval process.

CMP conducted an extensive Phase 1 Archaeological survey as part of the process. No identified site is located in the mapped shoreland zones crossed by the Project in Durham.

Criteria for the Issuance of a Shoreland Zoning Permit

The Project does not require the issuance of a Shoreland Zoning Permit. Nonetheless, the following section addresses the criteria for the issuance of a shoreland zoning permit found in Section 9.13(G).

1. Maintain safe and healthful conditions

The Project will maintain the same safe and healthful conditions that currently exist in the transmission line corridor. The infrastructure and equipment in the transmission line corridor is regularly maintained to established industry standards to ensure the safety of utility workers and the general public.

Maintaining sufficient clearances around the conductors is paramount to the safe and reliable operation of the transmission lines. These clearances are achieved through appropriate siting of the poles themselves and through the vegetation maintenance practices described above. All construction will be in accordance with CMP’s transmission standards, general industry standards, and good utility practices including all necessary live line working clearances, strength factors, and reliability factors as governed by the NESC. In all instances, the line has been designed to meet or exceed the NESC and other applicable standards. The transmission line and all facilities will be operated in full compliance with CMP safety standards, which fully comply with federal Occupational Safety & Health Administration requirements.

2. Not result in water pollution, erosion, or sedimentation to surface waters

As described above with respect to Shoreland Zoning Ordinance Sections 9.11(H), (N), (R), (S), and (T) the Project will not result in water pollution, erosion, or sedimentation to surface waters.

3. Adequately provide for the disposal of all wastewater.

Not applicable. There will be no wastewater disposal required for this Project.

4. Not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat

The Project will not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat. In order to identify existing resources, field biologists

documented wildlife while conducting field surveys for the Project. In addition, CMP also conducted fish and wildlife database searches and contacted state and federal natural resource agencies to obtain existing data on wildlife and fisheries resources in the vicinity of the project components.

The existing corridor occurs in wetlands within the LR district associated with an unnamed wetland. One single pole location (pole number 62-53) is partially located within a wetland at the LR district associated with an unnamed wetland and one existing single pole location (pole number 64-197) which will receive maintenance, is currently located within a wetland at the RP district associated with Libby Brook. No pole locations are located within the RP district of Runaround Brook. Pole number 62-53 will result in approximately seven square feet of permanent wetland impacts. Maintenance of pole 64-197 will not result in new permanent wetland impacts.

Six USACE vernal pools are located within the LR district at an unnamed wetland crossed by the existing corridor in Durham. No USACE vernal pools have been identified within the mapped RP district crossed by the existing corridor in Durham. No transmission poles are planned to be installed within vernal pools as part of the Project in the Town of Durham.

There are no rare, threatened or endangered species, inland waterfowl and wading bird habitats, or other significant wildlife habitat identified within the mapped shoreland zone crossed by the Project corridor in Durham.

There will be no in-stream work, and CMP will require the applicable riparian buffers, described in its VMP (Exhibit 6) and will implement its environmental protection requirements described in its Environmental Guidelines (Exhibit 7) and Environmental Control Requirements (Exhibit 8), such that impacts will be minimized and there will be no adverse impacts to fisheries and aquatic life.

5. Conserve shore cover and visual, as well as actual, points of access to inland waters
Not applicable. The Project will take place entirely within the existing corridor and does not include alterations to points of access to inland waters.

6. Protect archaeological and historic resources as designated in the Comprehensive Plan

As discussed above with respect to Shoreland Zoning Ordinance Section 15(U), the Project will not impact any archaeological or historic resources in Durham.

7. Avoid problems associated with floodplain development and use

As discussed further in the Floodplain Management application below, the portions of the Project within the floodplain will not cause problems with floodplain development.

Because of the nature of a transmission line and the absence of new impervious surface associated with the Project, construction and maintenance of the proposed transmission

line will not cause or increase flooding or cause a flood hazard to any neighboring structures. Furthermore, the Project will not affect runoff/infiltration relationships.

- 8. Is in conformance with the provisions of Section 9.11., Land Use Standards**
With respect to Ordinance Section 9.11 described above, the Project complies with all applicable provisions of the Ordinance.

5.0 SITE PLAN REVIEW PERMIT APPLICATION

The Site Plan Review Permit Application is attached as part of Exhibit 1. The following narrative describes the Project's conformity with Article 8, Section 8.5 and 8.6 of the Durham Land Use Ordinance (updated April 1, 2023). Site Plan Review approval is required per Article 18, Section 18.2 of the Land Use Ordinance which states that a building permit is required for the Project. See Article 8, Section 8.2.

Site Plan Review Mandatory Submissions

A. Application Form

Ten (10) Copies of the application form and one digital PDF of the application form have been provided to the town with all accompanying information.

B. Location Map

The Project maps provided in Exhibit 4 is drawn at a size adequate to show the relationship of the proposed development to adjacent properties and to allow the reviewing authority to locate the development within the municipality. The maps depict the outline of the Project in relation to the entirety of the CMP-owned corridor, shows the location of existing streets and roads in the vicinity, and includes the preparation date.

C. Site Plan

Waivers requested. Because of the size, scope and linear nature of the Project and the applicability of the requirements of Durham's Site Plan Review Ordinance to the Project, CMP is requesting waivers or relaxation of certain application standards to accommodate this transmission line proposal. Because of the unique, linear nature of this transmission line project, the Site Plan prepared here differs from what would be prepared for smaller scale, single parcel site developments. The natural resource maps in Exhibit 4 serve as the Site Plan, supplemented by the supporting narrative and Exhibits.

CMP is requesting a waiver from the ordinance requirement that the map utilize a scale of not more than 100 feet to one inch. CMP requests that the Board authorize a scale of 200 feet to one inch, as on the maps in Exhibit 4, because the scale of the Project is of such magnitude as to make a larger scale map unnecessary and cumbersome. Because of the length and scale of the Project in Durham, this smaller scale makes it easier to navigate the map book, while still depicting all of the necessary information. Therefore, CMP requests a relaxation of the terms of this ordinance related to the map scale requirement because the proposed scale of 200 feet to one inch will substantially secure the objectives of the requirements if so waived, the public health, safety, and welfare will still be protected, and this waiver will not nullify the intent or purpose of the Comprehensive Plan or the Site Plan Review Ordinance, and the performance standards of the Site Plan Review Ordinance will be met.

CMP also requests a waiver from the requirement that the Site Plan be embossed with the seal of a professional land surveyor. A formal boundary survey is unnecessary for the Project in Durham, please see the response to item 4, immediately below, for further explanation.

The transmission line design depicted in Exhibits 4 and 5 was completed by TRC Companies, Inc. The engineer of record is Brian A. Franklin, PE number 13011.

The Site Plan requires that “space must be reserved on the plan drawing for the signatures of the Planning Board and date together with the words, “Approved: Town of Durham Planning Board.” In lieu of this requirement, CMP requests a waiver and proposes to provide a draft Findings of Fact decision document for the Planning Board. A space will be provided on that document for signatures of the Planning Board and date, together with the following words “Approved: Town of Durham Planning Board.”

1. *Proposed name of the project and the name of the municipality in which it is located, plus the Assessor’s Map and Lot numbers.*

See Exhibit 1.

2. *The names and addresses of the record owner, applicant and individual or company who prepared the plan and adjoining property owners.*

Owner:

Central Maine Power Company
83 Edison Drive
Augusta, ME 04336
Attention: Gerry J. Mirabile, 207-242-1682

Applicant:

Central Maine Power Company
83 Edison Drive
Augusta, ME 04336
Attention: Gerry J. Mirabile, 207-242-1682

The transmission line design depicted in Exhibits 4 and 5 was completed by TRC Companies, Inc. The engineer of record is Brian A. Franklin, PE number 13011.

The names and addresses of all adjoining property owners are included in Exhibit 13. No earlier than thirty days nor less than ten days before the date of the Planning Board meeting where the application will be discussed, CMP will be mailing a notice intent to file the application to all abutters.

3. *Verification of right, title or interest in the property by deed, purchase and sales agreement, option to purchase, or some other proof of interest.*

See Exhibit 3.

4. A standard boundary survey of the parcel, giving complete descriptive data by bearings and distances, made and certified by a professional land surveyor. The corners of the parcel shall be located on the ground and marked by monuments.

A formal boundary survey is unnecessary. Existing information from the Town of Durham's Assessors Maps and CMP's source deeds in Exhibit 3 was referenced to demonstrate CMP's ownership. The rebuilt transmission centerline, pole locations were determined relative to the position of the existing transmission centerline (Section 64). Prior to construction activities, the centerline will be surveyed, and these locations will be clearly marked with grade stakes and/or flagging in the field. As shown on the cross sections and on the detailed maps (Exhibits 4 and 5), the upgraded transmission lines will occur in the center of the 400-foot-wide property. There will be no possibility of encroaching on abutting property boundaries, and thus sufficient information is available to establish, on the ground, all property boundaries without a formal survey. Further, a monumented perimeter survey would require an excessive amount of time and resources unnecessary to secure the objectives of the Ordinance. CMP therefore request a waiver from this requirement, as the actions to identify the transmission line location described above meet the performance standards of the Ordinance; the public health, safety, and welfare will be protected; and the waiver would not nullify the intent and purpose of the Comprehensive Plan or this Ordinance, and the performance standards of the Site Plan Review Ordinance will be met.

5. A copy of the most recently recorded deed for the parcel. A copy of all deed restrictions, easements, rights-of-way, or other encumbrances currently affecting the property.

See Exhibit 3 for the proof of title, right or interest. See Exhibit 11 for the deed restrictions, easements, rights-of-way, and other encumbrances affecting the property.

6. An indication of the type of sewage disposal to be used in the development.

Not applicable. The Project does not propose sewage disposal.

7. An indication of the type of water supply system(s) to be used in the development.

Not applicable. The project does not propose the use of a water supply system.

8. Wetland areas delineated on the survey, regardless of size.

See Exhibit 4 for the location of wetlands within or adjacent to the project site.

9. The location of all rivers, streams and brooks within or adjacent to the project site. If any portion of the project site is in the direct watershed of a great pond, the application shall indicate which great pond.

See Exhibit 4 for the location of rivers, streams, and brooks within or adjacent to the project site. The majority of the Project occurs in the direct watershed of Runaround Pond which is a great pond.

10. Topography: Five (5') foot contours for areas to be left in a natural state and (2') foot contours for areas to be altered by construction for roads, stormwater management and drainage, and building envelopes, showing elevations in relation to mean sea level.

See Exhibit 4. Topographic contours at 5-foot intervals are depicted on the maps. The maps do not include 2-foot contours because there are no roads or buildings included as part of the Project. Furthermore, the Project does not include permanent stormwater management and drainage as the transmission lines have been sited and designed to conform to existing topography, and any areas requiring grading or cut and fill for construction purposes will be returned to original contours and permanently stabilized with vegetation after construction. The Project will not alter stormwater runoff from predevelopment conditions. See responses to Section 8.5.C. 28 and 29 within this application on page for more information pertaining to the Project's Erosion & Sedimentation Control Plan and Stormwater Management Plan.

11 The zoning district in which the proposed project site is located and the location of any zoning boundaries affecting the project site.

The Project occurs in the Rural, Residential & Agricultural and Resource Protection land use districts. According to the table of land uses (Table 3.1) in Article 3, Section 3.1 of the Land Use Ordinance "Essential Services" such as the Project are an allowed use without Planning Board review in these zoning districts. Table 3.1 also indicates that "Other essential services" are allowed in all shoreland zones upon permit application to the Planning Board, which applications the Planning Board will review in accordance with the Condition Use Criteria in Article 7, Section 7.4 of the Land Use Ordinance. Section 6 outlines the shoreland zoning districts the Project passes and the districts are also depicted in Exhibit 4.

See Exhibit 4 for the Shoreland Zoning Districts in which the Project is located in.

12. The location and size of existing or proposed culverts and drainage ways on or adjacent to the property to be developed

Not applicable. There are no existing or proposed culverts and drainage ways on or adjacent to the property to be developed.

13. The location, names and present widths of existing streets, highways, easements, building lines, parks and other open spaces on or adjacent to the project site.

Public roadways that cross CMP's existing transmission corridor, easements, building lines are shown on the attached maps (Exhibit 4). There are no parks or "other open spaces" adjacent to the project site.

14. The traffic entering and existing sight distance along existing roads as calculated per Appendix 1, Section 1.4 for any intersection or driveway serving the project site.

See response to Section 5.2 (Access Management).

15. The width and location of existing and proposed roads or drives within the project site.

Not applicable. There are no proposed roads or driveways part of the Project in Durham. In areas where access does not already exist, temporary access ways will be established on CMP's property and will be used by the construction contractors to access work locations. These temporary access ways will be approximately 20 feet wide and will be fully restored and revegetated after construction. The proposed access points are also depicted in Exhibit 4.

16. Provisions for handling all solid wastes, including hazardous and special wastes and the location and proposed screening of any on-site collection or storage facilities

See Exhibit 8 for CMP's Environmental Control requirements. The Project will not include the storage or disposal of solid or liquid waste or any stored hazardous materials.

17. The location, dimensions, and materials to be used in the construction of proposed driveways, parking and loading areas, and walkways and any changes in traffic flow onto or off-site

See response to Section 5.2 for Access Management.

18. Proposed landscape or buffering.

Please see response to 5.16 for Landscaping.

19. The location dimensions and ground floor elevation of all proposed buildings or building expansion proposed on the site.

Not applicable. There are no proposed buildings or building expansions as part of the Project in Durham.

20. Location, front view, materials and dimensions of proposed signs together with the method for securing the sign.

Not applicable. There are no signs proposed as part of the Project in Durham.

21. Location and type of exterior lighting.

Not applicable. There will be no exterior lighting associated with the operation of the Project in Durham.

22. The location of all utilities, including fire protection systems.

See Exhibit 4. for the location of transmission lines associated with the Project area. As discussed in Section 2.2, CMP committed to outreach and communications regarding fire and medical support related to the construction and operation of the Project. Prior to construction, CMP will review the availability of fire hydrants, dry hydrants, or other water supplies for fire protection and will communicate this assessment to the Durham Fire Department Chief.

23. A general description of the proposed use or activity.

The Project proposes to rerate existing 115 kV transmission line Section 64 and to rebuild existing 115 kV transmission line Section 62.

24. Space must be provided on the plan drawing for the signatures of the Planning Board and date together with the words, "Approved: Town of Durham Planning Board."

Waiver requested. In lieu of this requirement, CMP requests a waiver and proposes to provide a draft Findings of Fact decision document for the Planning Board prior to the Public Hearing. A space will be provided on that document for signatures of the Planning Board and date, together with the following words "Approved: Town of Durham Planning Board."

25. If any portion of the development is in a flood-prone area, the boundaries of any flood hazard areas and the 100-year flood elevation, as depicted on the municipality's Flood Insurance Map, shall be delineated on the plan.

See Section 7 for the Floodplain Permit Application.

26. Areas within or adjacent to the proposed development which have been identified by the Maine Department of Inland Fisheries and Wildlife Beginning with Habitat Project or within the Durham Comprehensive Plan as a unique natural area or high or moderate value wildlife habitat. If such an area exists, the plan shall indicate appropriate measures for the preservation of the values which qualify the site for such a designation.

See response to Section 9.13(G)(4).

27. All areas within or adjacent to the proposed development which are either listed on or eligible to be listed on the National Register of Historic Places or have been identified in the Durham Comprehensive Plan or by the Maine Historic Preservation Commission as sensitive or likely contain such sites. If any such site

exists, the plan shall indicate appropriate measures for the preservation of the values which qualify the site for such a designation.

See response to Section 5.14, Archaeological Resources.

28. Erosion & Sedimentation Control Plan: An erosion and sedimentation control plan prepared in accordance with the Maine Erosion & Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers 2016 (Appendix 2). The Board may waive submission of the erosion and sedimentation control plan only if the project site is not in the watershed of Runaround Pond, and upon a finding that the proposed project will not involve construction or grading which changes drainage patterns and if impervious surfaces such as roofs, parking lots, and driveways are less than five (5%) percent of the area of the lot being developed. Calculations establishing the impervious surfaces limitations shall be submitted with the waiver request and the maximum impervious surface shall be noted on the plan.

Please see the response to the Section 5.11 Erosion Control Performance Standards. CMP's Environmental Guidelines (Exhibit 7) will serve as the soil erosion and sedimentation control plan to be submitted for approval.

29. Stormwater Management Plan: A stormwater management plan, prepared by a registered professional engineer in accordance with the most recent edition of Stormwater Management Manual Volume III May 2016 published by the Maine Department of Environmental Protection (Appendix 3). Another methodology may be used if the applicant can demonstrate it is equally applicable to the site. The Board may waive submission of the stormwater management plan only if the project site is not in the watershed of Runaround Pond, and upon a finding that the proposed development will not involve construction or grading which changes drainage patterns and if the addition of impervious surfaces such as roofs and driveways is less than five (5%) percent of the area of the lot being developed. Calculations establishing the impervious surfaces limitations shall be submitted with the waiver request and the maximum impervious surface shall be noted on the plan.

The Project will minimize stormwater runoff by deploying stormwater control methods described in CMP's Environmental Guidelines (Exhibit 7). The Project will meet the requirements of the Stormwater Management Law, 38 M.R.S. § 420-D. CMP applied for a MDEP Stormwater Management Permit in 2017 and received that approval as part of the MDEP Findings of Fact and Order issued for the Project on May 11, 2020, which is provided in Exhibit 2.

30. Phosphorus Management Plan:

Although portions of the Project proposed in Durham are located in the Runaround Pond watershed, no compaction of soils, or creation of large areas of impervious surfaces will occur. The transmission line poles themselves will be the only permanent fixtures and, as a result, currently occupy and will continue to occupy a total of approximately 0.0001 percent of the Project area (approximately 7 to 21 square feet of permanent impact per pole). The rest of the Project area will remain vegetated. To avoid runoff from construction areas, CMP will follow the erosion and sedimentation control procedures developed in CMP's Environmental Guidelines (Exhibit 7). The manual is based on the MDEP's Maine Erosion and Sediment Control BMPs and its Chapter 500 rules and contains specific BMPs appropriate for electric transmission line and substation construction. In addition, the corridor will be maintained without the use of fertilizers. This rebuild and rerate project will not result in new impervious surface area associated with pole locations, therefore not triggering the 20,000 square foot threshold that requires a phosphorus management plan.

D. Additional Studies that may be Required by the Board

None of the additional studies that may be requested by the Board should be required here because they are inapplicable to the Project. To the extent necessary, CMP nevertheless requests waivers of each study for the following reasons:

1. High Intensity Soil Survey

Waiver requested. A soils report for the transmission line components located in Durham should not be required since the Project does not require subsurface waste disposal and is not an intensive land use.

2. Hydrogeological Assessment

Waiver requested. The Project should not require a hydrogeological assessment as the Project does not require the use of groundwater.

3. Traffic Trip Generation

Waiver requested. In areas where access does not already exist, CMP will establish temporary corridor access points for equipment access to the corridor for construction. This use will not cause unreasonable highway or public road congestion.

During the construction phase, some material and equipment deliveries may require vehicles to stop on or back into a street. During these infrequent occasions, spotters or flaggers will be used to assist vehicles into or out of the corridor.

4. Traffic Impact Analysis

Waiver requested. There is no need for a traffic engineering study. No new permanent roads or driveway entrances are proposed in Durham. Prior to construction activities, CMP will establish temporary access points from public or private roadways into the corridor. An adequate number of access points will be determined in locations that provide safe access with respect to sight distances, and

intersections, schools, or other applicable traffic generators. As described above, all temporary access points will meet MDOT *Highway Driveway and Entrance Rules* as specified in Title 17 Chapter 299.

Approval Criteria & Design Standards

A. Utilization of the Site

The Project plan does reflect the natural capabilities of the site to support development. The Project has been sited within an existing CMP transmission line corridor and does not require tree removal in the Town of Durham; therefore, it is located in those portions of the site that have the most suitable conditions for development. CMP's transmission line corridor will continue to be maintained in an early successional scrub/shrub habitat. The transmission line corridor traverses both forested areas and agricultural lands.

Capable vegetation will continue to be removed and controlled in the manner described in the VMP (Exhibit 6). Capable vegetation is defined as woody plant species and individual specimens that are capable of growing into the conductor safety zone. Throughout construction, shrub and herbaceous vegetation will remain in place to the extent practicable to minimize soil disturbance.

The location of new transmission line poles were engineered to avoid impacting environmentally sensitive areas to the greatest extent practicable and equipment access through environmentally sensitive areas will be avoided as much as practicable. Erosion controls and/or timber mats will be used, in accordance with CMP's Environmental Guidelines (Exhibit 7), to protect environmentally-sensitive areas such as wetlands, steep slopes, floodplains, significant wildlife habitats, habitat for rare and unique natural features, and natural drainage ways. The tree cutting and construction practices provided in the VMP (Exhibit 6) and the Environmental Guidelines will be applied to minimize the extent and duration of soil disturbance and the potential for erosion and sedimentation and to protect adjacent natural resources.

In areas where the Project crosses open agricultural areas, and the existing transmission line is visible from nearby locations, landscaping would not be practical or effective in screening views of the transmission line. Therefore, no landscaping is proposed in these areas. Natural drainage areas will be preserved to the maximum extent practicable.

B. Adequacy of Road System

Not applicable. As described in the response to 5.2 (Access Management), the Project will generate no additional traffic other than construction vehicles during construction.

C. Vehicular Access into the Site

Please see response to 5.2 (Access Management).

D. Internal Vehicular Circulation

Not applicable. During construction, construction vehicles will be temporarily parked in the corridor, outside of protected natural resources and applicable buffers. The layout and design of any temporary parking areas will provide for safe and convenient circulation of vehicles throughout the site. As discussed above, in the infrequent event that construction vehicles need to back onto a street, spotters or flaggers will be used to assist vehicles into or out of the corridor.

E. Parking Lot Layout and Design

Not applicable. There will be no parking lots associated with the Project.

F. Utilities

Not applicable. No utility service is required for the Project. To the extent applicable, see response to 5.16 for Landscaping.

G. Lightning Design Standards

Not applicable. There will be no exterior lighting associated with the operation of the Project in Durham.

H. Signage

Not applicable. There are no signs proposed as part of the Project in Durham.

I. Fire Protection

As discussed above, CMP has committed to outreach and communications regarding fire support related to the construction and operation of the Project. CMP will notify the local fire department prior to the commencement of construction activities of the type of work that will occur, its location, and when the activities have concluded. CMP, in cooperation with local emergency responders, will establish emergency response procedures and protocols that will be followed in the event emergency response to the Project area is required.

Additionally, CMP will review fire support issues in meetings with the CEO and planning officials, and with the public in Planning Board proceedings. This will include a summary of discussions with local fire response personnel regarding records of any past fire events on the corridor, an assessment of locally-available resources, and any additional provisions that have been included in the construction contractors' scope of work, which will be provided to support local emergency response.

Fire suppression requirements for the Project are no different than those for the transmission lines as they currently exist.

J. General Buffer Standards

Not applicable. The Project will occur entirely within the existing transmission line corridor in the Town of Durham.

K. Historic & Archeological Resources

Please see response to 5.14 for Historic Resources.

L. Financial Capacity

Please see response to 7.4(A)(8) for Financial & Technical Ability.

M. Technical Ability

Please see response to 7.4(A)(8) for Financial & Technical Ability.

6.0 FLOODPLAIN MANAGEMENT PERMIT APPLICATION

The following application section describes the Project's compliance with the Town of Durham Floodplain Management Ordinance (Adopted April 1, 2023). This application identifies the regulated FEMA delineated floodplains within the Project area and addresses the requirements of Section 11.3, Section 11.5, Section 11.6, and Section 11.8 of the Town's Floodplain Management Ordinance.

FEMA Flood Hazards Zone

The Project's transmission lines will cross three FEMA-mapped 100-year flood zones in Durham; Libby Brook, an Unnamed Tributary to Runaround Brook, and Runaround Brook (see Exhibit 4). The flood zone associated with the Libby Brook is shown on the FEMA Flood Insurance Rate Maps ("FIRM") Community Panel No. 23001C0430E, effective date: July 8, 2013. The flood zone associated with an Unnamed Tributary to Runaround Brook is shown on the FIRM 23001C0430E, effective date: July 8, 2013. The flood zone associated with Runaround Brook is shown on the FIRM 23001C0430E, effective date: July 8, 2013. The flood zones associated with each brook are identified as Zone A. The proposed Project activities within the 100-year flood zone are as follows:

Libby Brook (Exhibit 4, maps 6, 7, and 8) - The existing CMP corridor crosses the flood hazard area where the corridor is intersected by Stackpole Road (FIRM 23001C0430E). The proposed rebuilt transmission lines will span the stream and will require temporary access across the stream. The closest transmission pole will be installed outside of the flood zone, approximately 90 feet northeast of the brook. Pole 64-197 is located just outside of the floodplain. Libby Brook does not have a designated regulatory floodway on the community's Flood Insurance Rate Map; in such a case, the Town of Durham's Land Use Ordinance defines the regulatory floodway as "the channel of a river or other water course and the adjacent land areas to a distance of one-half the width of the floodplain as measured from the normal highwater mark to the upland limit of the floodplain."

Unnamed Tributary to Runaround Brook (Exhibit 4, map 10) - The existing CMP corridor crosses the flood hazard area where the corridor is intersected by Pownal Road (FIRM 23001C0430E). The proposed rebuilt transmission lines will span the brook and will not require temporary access across the brook. The closest transmission pole will be installed outside of the flood zone, approximately 63 feet northwest of the brook.

Runaround Brook (Exhibit 4, map 12) - The existing CMP corridor crosses the flood hazard area approximately 865 feet north of the intersection of the existing transmission corridor and Durham Road (FIRM 23001C0430E). The proposed rebuilt transmission lines will span the stream and will require temporary access across the stream. The

closest transmission pole will be installed outside of the flood zone, approximately 282 feet south of the brook.

In summary, no new poles will be installed within the FEMA-mapped flood hazard areas associated with Libby Brook, the Unnamed tributary to Runaround Brook or Runaround Brook in Durham; however, CMP will require temporary access within the FEMA-mapped flood hazard area associated with Libby Brook and Runaround Brook. The proposed project will not have any impact on flood levels.

Floodplain Management Ordinance Section 11.3 – Application for Permit

The following section includes the information requested in Section 11.3 of the Durham Floodplain Management Ordinance.

A. The name, address and phone number of the applicant, owner and contractor

Owner:

Central Maine Power Company
83 Edison Drive
Augusta, ME 04336
Attention: Gerry J. Mirabile, 207-242-1682

Applicant:

Central Maine Power Company
83 Edison Drive
Augusta, ME 04336
Attention: Gerry J. Mirabile, 207-242-1682

Construction Contractor:

Cianbro-Irby
360 US Route 1
Falmouth, Maine 04105
Attention: Beto Nava, 207-217-5743

B. An address and map indicating the location of the construction site

The map provided in Figure 2-2 shows the extent of the Project in the Town of Durham.

C. A Site Plan showing location of existing and/or proposed development

The project scope and natural resource maps (Exhibit 4) include aerial photo-based maps showing detailed Project information in Durham, including the location of the CMP corridor, existing and proposed pole locations, proposed access ways, flood zones, wetlands and waterbodies, and other natural resource data. There will be no sewage disposal facilities or water supply facilities associated with the project. Also, there will be no permanent change in topography that would require cut and fill. The transmission line has been sited and designed to conform to existing topography, and any areas requiring grading or cut and fill for construction purposes will be returned to original contours and permanently stabilized with vegetation after construction.

D. A statement of the intended use of the structure and/or development

The proposed development over the flood zone consists of rebuilding existing transmission line Section 62 and rerating transmission line Section 64.

E. A statement of the cost of the development, including all materials and labor

The portion of the Project within the flood zone in the Town of Durham is anticipated to cost approximately \$32,788.58, including materials and labor.

F. A statement as to the type of sewage system proposed

Not applicable. No sewage system is proposed as part of the Project in the Town of Durham.

G. Specification of dimensions of the proposed structure and/or development

The proposed Project in Durham does not include a “structure,” which is defined in Article 19 “for floodplain management purposes” as a “walled and roofed building.” No new poles proposed by the Project are located within flood zones in the Town of Durham.

H. The elevation in relation to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or to a locally established datum in Zone A only, of the:**1. base flood at the proposed site of all new substantially improved structures, which is determined:**

a. in Zone AE, from data contained in the “Flood Insurance Study – Androscoggin County, Maine” as described in Section 1; or,

b. In Zone A:

Not applicable. The standards for Items H through K.2 apply only to new construction or substantial improvement of a “structure,” which is defined in Article 19 “for floodplain management purposes” as a “a walled or roofed building.” The aerial crossing of the transmission line does not meet this definition and, as such, the elevation reference points in Section H do not apply to the proposed work in the flood zone.

I. A description of an elevation reference point established on the site of all developments which elevation standards apply as required in Section VI

Not applicable.

J. A written certification by a Professional Land Surveyor, registered professional engineer or architect, that the base flood elevation and grade elevations shown on the application are accurate

Not applicable.

K. The following certifications as required in Section VI by a registered professional engineer or architect

Not applicable. As per the Ordinance, K.1 and K.2 do not apply to transmission line poles since they do not meet the definition of a “structure.” The Project also does not include any bridges or containment walls. Therefore K.3 and K.4 do not apply.

L. A description of the extent to which any water course will be altered or relocated as a result of the proposed development

Not applicable. The Project does not propose maintenance to existing poles or propose the installation of new poles within the floodplain or banks of Libby Brook, an Unnamed Tributary of Runaround Brook, or Runaround Brook. The Project will not alter or relocate the course of any water body in the Town of Durham.

M. A statement of construction plans describing in detail how each applicable development standard in Section 11.6. will be met.

The Project's compliance with Section 11.6, including a detailed description of how each applicable development standard is met, is presented below.

Floodplain Management Ordinance Section 11.5 – Review Standards for Flood Hazard Development Permit Applications

F. If the application satisfies the requirements of this Article, approve the issuance of one of the following Flood Hazard Development Permits based on the type of development:

3. A Flood Hazard Development Permit for Minor Development for all development that is not new construction or a substantial improvement, such as repairs, maintenance, renovations, or additions, whose value is less than 50% of the market value of the structure. Minor development also includes, but is not limited to: accessory structures as provided for in Section 11.6.J., mining, dredging, filling, grading, paving, excavation, drilling operations, storage of equipment or materials, deposition or extraction of materials, public or private sewage disposal systems or water supply facilities that do not involve structures; and non-structural projects such as bridges, dams, towers, fencing, pipelines, wharves and piers.

The proposed Project does not include structures, as that term is defined in Article 19. Thus, the project is a "minor development" as it is a "non-structural project" and should be issued a Flood Hazard Development Permit for Minor Development.

Floodplain Management Ordinance Section 11.6 – Development Standards

A. All Development

The Floodplain Ordinance requires that all development must be modified or adequately anchored to prevent floatation, collapse of or lateral movement of the development resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy; use construction materials that are resistant to flood damage; and use construction methods and use practices that will minimize flood damage.

One round wooden pole, pole 64-171, currently exists within the floodplain in Durham. The direct-embedded pole meets or exceeds the National Electrical Safety Code (NESC 2017), Section 250 and 251. In addition to those strength and loading requirements, the effects of buoyancy and any lateral loadings resulting from hydraulic loadings were

considered, where applicable, and addressed in its design to prevent flotation, collapse, or lateral movement. In fact, the maintenance being performed to this structure is the installation of a cross brace which will further prevent collapse and lateral movement by reinforcing and further stabilizing the pole.

B. Water Supply

Not applicable. There will be no water supply systems.

C. Sanitary Sewage Systems

Not applicable. There are no proposed sanitary sewage systems.

D. On Site Waste Disposal Systems

Not applicable. There are no on-site waste disposal systems proposed.

E. Watercourse Carrying Capacity

Not applicable. There will be no alterations or relocations of watercourses.

F. Residential Structures

Not applicable. The Project is not a residential structure.

G. Non-Residential Structures

Not applicable. The Project is not a non-residential structure.

H. Manufactured Homes

Not applicable. The Project is not a manufactured home.

I. Recreational Vehicles

Not applicable. The Project is not a recreational vehicle.

J. Accessory Structures

Not applicable. The Project is not an accessory structure.

K. Floodways

Not applicable. The Project does not include any poles within a regulatory floodway.

L. Enclosed Areas Below the Base Floor

Not applicable. There are no proposed enclosed areas.

M. Bridges

Not applicable. There are no proposed bridges.

N. Containment Walls

Not applicable. There are not proposed containment walls.

O. Wharves, Piers and Docks

Not applicable. There are no proposed wharves, piers or docks.

Floodplain Management Ordinance Section 11.8 – Review of Subdivisions and Development Proposals

A. Proposals are consistent with the need to minimize flood damage.

As demonstrated by the responses to Sections 11.3 and 11.5, above, the Project will not cause flooding or flood damage.

B. Public utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damages.

No sewer, gas, or water systems are proposed as part of this Project. The Project involves upgrades to two existing electric transmission lines, and CMP has appropriately located the Project to avoid any flood damage.

C. Adequate drainage is provided so as to reduce exposure to flood hazards.

The area occupied by existing poles will not increase as a result of the Section 62 rebuild or the Section 64 rerate, therefore there will be no increase in stormwater runoff from the Project. The Project will not cause or increase flooding or cause a flood hazard to any neighboring structures. Furthermore, the Project will not affect runoff/infiltration relationships.

The Project will minimize stormwater runoff by deploying stormwater control methods described in the Environmental Guidelines (Exhibit 7). Temporary access roads and any construction activities will be carefully planned and designed to utilize existing natural runoff control features, such as upland vegetated buffers, and diversion and dissipation techniques such as water bars, check dams, or settling basins. Shrubby vegetation will be retained to the extent practicable, and soil exposure will be minimized during construction. After construction is complete, all areas will be returned to pre-construction contours, reseeded as needed, and allowed to revegetate to a scrub-shrub condition. The Project will not alter stormwater runoff from predevelopment conditions.

D. All proposals include base flood elevations, flood boundaries, and, in a riverine floodplain, floodway data. These determinations shall be based on engineering practices recognized by the Federal Emergency Management Agency.

The Project's natural resource maps depict the FEMA flood boundaries in Durham. The requirement for base flood elevations apply only to the new construction or substantial improvement of "structures" as defined in the Land Use Ordinance. The aerial crossing of the transmission line and its poles do not meet this definition, and base flood elevations are therefore not required.

E. Any proposed development plan must include a condition of plan approval requiring that structures on any lot in the development having any portion of its land within a Special Flood Hazard Area, are to be constructed in accordance with Section 11.6 of this ordinance.

Not applicable. The proposed Project does not include “structures” as that term is defined by the Land Use Ordinance. The Project’s compliance with Section 11.6, Development Standards, is presented in the preceding section of this application.

EXHIBIT 1 APPLICATION FORMS



TOWN OF DURHAM+
630 Hallowell Road
Durham, Maine 04222

**Office of Code Enforcement
and Planning**

Tel. (207) 376-6558
Fax: (207) 353-5367

SITE PLAN REVIEW APPLICATION

Project Name: _____

Application Date: _____

A. Owner & Developer

Is applicant owner of the property? _____ YES _____ NO (If no, letter of owner authorization is required)

Property owner: _____ Property developer: _____

Address _____ Address: _____

Telephone number: _____ Telephone number: _____

Email address: _____ Email address: _____

What interest does the applicant have in the property to be developed (owner, option, purchase & sale agreement, etc.)? _____

B. Project Designers

Surveyor: _____ Engineer: _____

Address: _____ Address: _____

Telephone number: _____ Telephone number: _____

Email address: _____ Email address: _____

Person to whom all correspondence on project should go: _____

Site Plan Review Application

Project Name: _____

C. General Property Information

Property location: _____

Tax Map/Lot numbers: _____

Current zoning: _____

What are the existing uses of the property, if any (e.g., farmland, woodlot, residence, business)?

Is all of the property being considered for development? _____ YES _____ NO

Total acreage of parcel: _____ Acreage to be developed: _____

Will the project involve construction of new buildings or expansion of existing structures?

_____ YES _____ NO

Will the project involve construction of new parking or expansion of existing parking areas?

_____ YES _____ NO

Is any part of the land subject to shoreland zoning regulations? _____ YES _____ NO

Is any part of the land shown on the FEMA flood maps? _____ YES _____ NO

Is any part of the land within the watershed of Runaround Pond? _____ YES _____ NO

Have all water bodies and wetlands on the property been mapped? _____ YES _____ NO

Has this project received a conditional use permit? _____ YES _____ NO

Date of conditional use approval: _____

List any existing easements or restrictive covenants that the property is subject to:

D. Required Public Notices

Have all abutting property owners received notice per Section 8.4.D.? _____ YES _____ NO

E. Development Information

Name of proposed development: _____

What is the size of the proposed building construction or expansion? _____ sq. ft.

What is the size of the proposed parking construction or expansion? _____ sq. ft.



TOWN OF DURHAM
630 Hallowell Road
Durham, Maine 04222

*Office of Code Enforcement
 and Planning*

Tel. (207) 376-6558
Fax: (207) 353-5367

SITE PLAN REVIEW CHECKLIST
SECTION 8.5 SITE PLAN REVIEW SUBMISSIONS SECTION 8.6 –
PERFORMANCE STANDARDS

PROJECT NAME _____ **DATE** _____

This checklist has been prepared to assist applicants in developing their applications. It should be used as a guide. The checklist does not substitute for the site plan review criteria or the requirements of Article 8 of the Land Use Ordinance. The Planning Board also will be using the checklist to make sure that your application is complete and meets all standards. **Fill out all shaded columns in the checklist by initialing a box in each row.** Indicate if the information has been submitted or if a waiver is requested. The application need not contain separate plans as implied below. The perimeter survey, site plan and general engineering plans may be contained on the same drawing for site plan approval. However, detailed engineering drawings such as grading plans, utility plans, stormwater plans, and erosion/sedimentation plans should be presented on separate sheets.

SITE PLAN REVIEW REGULATIONS	Submitted by Applicant	Waiver Requested (with waiver request form)	Received by Planning Board	Waiver Granted
8.4 D.	Required public notice sent to abutting property owners			
8.5	SITE PLAN REVIEW SUBMISSIONS REQUIRED FOR COMPLETENESS REVIEW (10 Copies of application form & all materials)			
A.	Completed application form		NOT WAIVABLE	NOT WAIVABLE
B.	Location map w/ required information		NOT WAIVABLE	NOT WAIVABLE
C.	Site plan at readable scale (1"=100' maximum)			
C.1	Proposed project name, Town, & Map & Lot #s		NOT WAIVABLE	NOT WAIVABLE
C.2	Names of owner, applicant, plan preparer & abutters		NOT WAIVABLE	NOT WAIVABLE

Site Plan Review Checklist – Project Name _____

SITE PLAN REVIEW REGULATIONS		Submitted by Applicant	Waiver Requested (with waiver request form)	Received by Planning Board	Waiver Granted
C.3	Documentation of legal rights to develop property		NOT WAIVABLE		NOT WAIVABLE
C.4	Standard boundary survey				
C.5	Copy of most recent deed w/ any encumbrances		NOT WAIVABLE		NOT WAIVABLE
C.6	All septic system test pit logs				
C.7	Proposed water supplies for domestic & firefighting purposes				
C.8	All wetlands mapped				
C.9	Location of any water features & indication of location in or out of Runaround Pond watershed				
C.10	Topography at 5 ft. & 2 ft. contours (for areas where construction will occur)				
C.11	Zoning district and any district boundaries		NOT WAIVABLE		NOT WAIVABLE
C.12	Location (w/ size) of existing & proposed culverts & drainage ways shown				
C.13	Existing streets, easements, buildings, parks, & deeded open spaces (on or adjacent)				
C.14	Traffic entrance(s) sight distances external & internal roads				
C.15	Location & width of existing & proposed access drives				
C.16	Proposed waste disposal types & facilities				
C.17	Proposed driveways, parking & loading areas, walkways, & circulation				
C.18	Proposed landscaping & buffering				

*See application narrative for more information.

Site Plan Review Checklist – Project Name _____

SITE PLAN REVIEW REGULATIONS		Submitted by Applicant	Waiver Requested (with waiver request form)	Approved by Planning Board	Waiver Granted
C.19	Location, dimensions, ground floor elevation of all buildings & expansions		NOT WAIVABLE		NOT WAIVABLE
C.20	Location and details of all signage				
C.21	Location & type of exterior lighting				
C.22	Location of all utilities, including fire protection systems				
C.23	General description of proposed use or activity				
C.24	Signature block for Planning Board Chair				
C.25	Flood mapping if in FEMA flood area				
C.26	Wildlife habitat identified per MIF&W mapped or confirmed absent				
C.27	Historic & archaeological resources identified per MHPC or confirmed absent				
C.28	Erosion & Sediment Plan				
C.29	Stormwater Plan				
C.30	Phosphorus Plan (if in watershed of Runaround Pond)				
D.	ADDITIONAL STUDIES THAT MAY BE REQUIRED BY THE BOARD (Based on project type & size, site issues, or issues that come up during review)				
D.1	High intensity soil survey	NA*			
D.2	Hydrogeological assessment for groundwater withdrawal	NA*			
D.3	Traffic trip generation (required for larger projects)	NA*			
D.4	Traffic impact study (required for larger projects or if safety issues are identified)	NA*			
E.	Additional information required by Planning Board to verify compliance with standards (requires vote of the Board)				

*See application narrative for more information.

Site Plan Review Checklist – Project Name _____

	SITE PLAN REVIEW REGULATIONS	Submitted by Applicant	Waiver Requested (with waiver request form)	Approved by Planning Board	Waiver Granted
8.6	REVIEW STANDARDS TO BE ADDRESSED BY THE APPLICANT'S SUBMISSIONS AFTER THE APPLICATION IS DEEMED COMPLETE BY THE PLANNING BOARD				
8.6.A	Utilization of the Site				
	Plan reflects natural capabilities of site to support the development				
	Buildings & parking located on suitable land				
	Environmentally sensitive portions of site avoided & protected				
	Natural drainage maintained to maximum extent practical				
8.6.B	Adequacy of Road System				
	Access road(s) have capacity to take the added traffic proposed				
	Traffic analysis for projects with more than 100 peak hour trips				
8.6.C	Vehicular Access into the Site				
C.1	Meets entrance sight distances per Appendix 1, Section 1.4				
C.2	Access onto road(s) within steepness limits (3% for two car lengths)				
C.3	Access off secondary road if more than one frontage				
C.4	Off-site traffic improvements required per traffic study				
C.5	Entrance designed to avoid queuing in lanes of road giving access to the site				
C.6.a	Only 1 driveway entrance if less than 100 daily trips & less than 30 feet wide				
C.6.b	No more than 2 entrances if 100 daily trips or more				
C.6.c	Entrance(s) at least 50 ft from any intersection				
C.6.d	Entrances at least 75 ft apart				

Site Plan Review Checklist – Project Name _____

SITE PLAN REVIEW REGULATIONS		Submitted by Applicant	Waiver Requested (with waiver request form)	Approved by Planning Board	Waiver Granted
8.6.D	Internal Vehicular Circulation				
D.1	Site plan minimizes cut & fill alterations and provides adequate room for safe operations				
D.2	If large delivery vehicles will need access, entrance & circulation designed for WB-40 vehicles				
D.3	Fire lanes around building(s) adequate & clearly marked				
8.6.E	Parking Layout and Design				
E.1	No backing into road for parking required				
E.2	Parking set back from side & rear property lines by 15 ft. unless buffering requires more distance				
E.2	Parking set back from front property line by 25 ft. unless buffering requires more distance				
E.3	Parking spaces and access aisles meet dimensional requirements				
E.4	Signs adequate for one-way circulation if proposed				
E.5	No double stacking of parking spaces				
E.6	Vehicles prevented from overhanging walks & drives or damaging landscaping & lighting				
E.7	Safe pedestrian circulation from buildings to parking				
8.6.F	Utilities				
	Adequate utilities provided and underground or adequately screened				

Site Plan Review Checklist – Project Name _____

SITE PLAN REVIEW REGULATIONS	Submitted by Applicant	Waiver Requested (with waiver request form)	Approved by Planning Board	Waiver Granted	
8.6.G	Lighting Design Standards – Lighting plan submitted showing:				
G.1	Max. height of light poles 25 ft. or height of building, whichever is less				
G.2	Max. apex of illumination from fixtures upward is 150 degrees max.				
G.3	No building spotlights used for illumination				
G.4	Light poles protected from vehicular damage				
G.5	Building & light pole fixtures shielded to avoid nuisance glare & no string lights				
G.6.a	Parking lot average illumination level of 1.5 fc				
G.6.b	Intersection illumination level of 3 fc				
G.6.c	Max. illumination at property lines of 1 fc				
G.7.a	Auto service station fueling canopies have less than 20 fc average & 30 fc maximum with 1.25 uniformity ratio (max to min)				
G.7.b	Fueling canopies light fixtures recessed or flush with max upward apex of illumination of 85 degrees				
G.7.c	No light fixtures on fueling canopy except to illuminate approved signs				
8.6.H	Signage				
	All signs meet the requirements of Section 5.24		NOT WAIVABLE		NOT WAIVABLE
8.6.I	Fire Protection				
	The water supply will sustain fire suppression requirements of NFPA 1142, Water Supplies for Suburban & Rural Fire Fighting				

Site Plan Review Checklist – Project Name _____

SITE PLAN REVIEW REGULATIONS	Submitted by Applicant	Waiver Requested (with waiver request form)	Approved by Planning Board	Waiver Granted	
8.6.J	General Buffering Standards – Landscaping Plan showing the following:				
J.1	Evergreen buffers consist of 6-8 ft trees planted in alternate pattern 5 ft apart				
J.2.a	Buffers along property lines to shield uses from abutting property				
J.2.b	Garbage areas, utilities, service equipment, and outdoor storage totally screened				
J.2.c	Parking areas & other vehicle storage screened but traffic visibility at entrance(s) not obstructed				
J.3	Existing vegetation & landscape features provide adequate screening in lieu of installed buffers				
J.4	Existing and proposed buffers are adequate to shield structures & uses from non-compatible properties & public roadways				
J.5	Fencing & screening is durable and will be properly maintained by the owner				
J.6	Fencing & screening located within the property to allow access for maintenance on both sides				
J.7	Management system will be in place to ensure long-term maintenance of buffering				
8.6.K	Historic & Archaeological Resources				
	Applicant has confirmed with MHPC that no historic or archaeological resources are present or measures are included in the site plan to protect those resources.				
8.6.L	Financial Capacity				
	The applicant has adequate financial resources to construct improvements in keeping with the standards				

*See application narrative for more information.

Site Plan Review Checklist – Project Name _____

SITE PLAN REVIEW REGULATIONS	Submitted by Applicant	Waiver Requested (with waiver request form)	Approved by Planning Board	Waiver Granted	
8.6.M	Technical Ability				
	Applicant has experience with site development and/or has retained qualified consultants & contractors to complete the project in keeping with the standards				
8.7	WAIVERS (Based on review of individual waiver requests)				
A.	For submission waivers, applicant has demonstrated all performance standards have been met	(Attach waiver requests)			
B.1	For waivers of performance standards, the applicant has provided sound engineering and/or environmental analysis to support the request	(Attach waiver requests)			
B.2	The waivers will not have the effect of nullifying any regulation	Y			
B.3	The site plan review criteria are substantially met by the proposed design	Y			
B.4	Any performance standard waivers are noted on the approved site plan	No performance standard waivers.	NOT WAIVABLE		NOT WAIVABLE

*See application narrative for more information.



TOWN OF DURHAM
630 Hallowell Road
Durham, Maine 04222

*Office of Code Enforcement
 and Planning*

Tel. (207) 376-6558
Fax: (207) 353-5367

SITE PLAN REVIEW WAIVER REQUEST

A SEPARATE REQUEST FORM MUST BE SUBMITTED FOR EACH WAIVER REQUESTED

Project Name: _____

Application Date: _____

A. Applicant Contact Information

Applicant: _____ Address: _____

Telephone number: _____

Email address: _____

B. Identification of Waiver Request

Waiver Type: Submissions _____ Performance Standards _____

Land Use Ordinance Section Number: _____

C. Explanation of Waiver Request

Why is the waiver being requested by the applicant?

Project Name: _____

D. Justification of Waiver Request

Why do you think that a waiver of the site plan review requirements is justified in this case?

E. Supporting Documentation

What supporting documentation for the waiver has been included with the site plan application?

F. Signature of Applicant

To the best of my knowledge, all of the above stated information submitted in this application is true and correct.

Printed Name: _____

Date

Project Name: _____

SITE PLAN REVIEW WAIVER REQUEST FINDINGS OF FACT

Section 6.35 WAIVERS

- A. **Waivers of Certain Submission Requirements:** Where the Board makes written findings of fact that there are special circumstances of a particular site, or that the application is simple and minor in nature, it may waive portions of the submission requirements, unless prohibited by these regulations or Maine statutes, provided the applicant has demonstrated that the criteria and performance standards of these regulations have been or will be met, the public health, safety, and welfare are protected, and provided the waivers do not have the effect of nullifying the intent and purpose of the comprehensive plan, the zoning regulations, or these subdivision regulations.

Motion made by _____: The special circumstances of the particular tract proposed for development and the simple nature of the application indicate that the following submission item is unnecessary to verify compliance with the site plan review criteria and standards and would not nullify the intent and purpose of the comprehensive plan, zoning regulations, or these site plan regulations:

Motion seconded by _____:

Votes to approve: _____ **Votes to deny:** _____

- B. **Waivers of Performance Standards:** Where the Board makes written findings of fact that due to special circumstances of a particular site proposed to be developed, the provision of certain required improvements is not requisite to provide for the public health, safety or welfare, or an alternative design is equal to or better in meeting the site plan review criteria, it may waive the design standards, subject the following criteria:

1. The applicant has provided the Planning Board with a factual basis for granting the waiver that is supported by sound engineering and/or environmental analysis (cost considerations are not justification);
2. The waiver(s) do not have the effect of nullifying the intent and purpose of the zoning regulations or these subdivision regulations;
3. The criteria of these site plan review regulations have been or will be substantially met by the proposed site plan; and,
4. The requested performance standard waivers are noted on the recorded subdivision plan (submission waivers are not noted on the plan).

Motion made by _____: The applicant has provided documentation based on sound engineering and/or environmental analysis that the following standard can be waived for the proposed site plan and is not requisite to provide for the public health, safety, and welfare subject to the proposed conditions of site plan approval:

Motion seconded by _____:

Votes to approve: _____ **Votes to deny:** _____



TOWN OF DURHAM
630 Hallowell Road
Durham, Maine 04222

*Office of Code Enforcement
and Planning*

Tel. (207) 376-6558
Fax: (207) 353-5367

CONDITIONAL USE PERMIT APPLICATION

Please read the Conditional User Permit Application Instructions and meet with the Code Enforcement Officer before completing this Application.

PART I. PROPERTY INFORMATION

Applicant's name and address:

Owner's name and address: (if different than applicant)

Property address:

Property tax map: and lot: 012-025, 013-012, and 009-016

Property zone(s) (list all):

Property overlay zone(s) (list all):

Current approved property use:

Is this property in a subdivision: Yes No

Is any part of this property in a flood plain: Yes No

Will there be any new structures, expansions of existing structures, or the construction or expansion of parking areas: Yes No

PART II. PROPOSED USE

Please fully describe the proposed use; including all of the following (you may attach separate or additional sheets):

- Describe the proposed use in detail
- Hours of operation
- Plans for waste disposal
- Anticipated traffic (deliveries, customers, etc.)
- Other relevant information on the proposed use

PART III. CONDITIONAL USE STANDARDS

For each standard, describe how what potential impacts your project might have, how your project meets the standard, and what documents the Planning Board should refer to that support your position.

- A. Public Health Impacts:** The proposed use will not create unsanitary or unhealthful conditions by reason of sewage disposal, emissions to the air or water, or other aspects of its design or operation.

Please include how you will address any sewage disposal (septic, etc.), any fumes or air emissions, any discharge or runoff that might pollute water, trash, and other potential public health impacts.

Why your project won't create any public health impacts:

Relevant documents:

B. Traffic Safety Impacts: The proposed use will not create unsafe vehicular or pedestrian traffic conditions when added to existing and foreseeable traffic in its vicinity.

Please include how much and the type of traffic you anticipate, hours of traffic, type of traffic currently on the road, any entrance permits, entrance sight distances, hazardous intersections in the area, traffic studies, etc.

Why your project won't create any traffic safety impacts:

Relevant documents:

C. Public Safety Impacts: The proposed use will not create public safety problems which would be substantially different from those created by existing uses in the neighborhood or require a substantially greater degree of municipal services than existing uses in the neighborhood.

Please include a description of the types of surrounding uses (residential, home businesses, commercial businesses, farms, etc.); the types of public safety problems your use might pose and how you will address them; and the types of municipal services your use will require (education, trash disposal, fire protection, law enforcement protection, etc.).

Why your project won't create public safety problems that are substantially different from the surrounding uses:

Why your project won't require a substantially greater degree of municipal services than the surrounding uses:

Relevant documents:

D. Environmental Impacts: The proposed use will not result in sedimentation or erosion, or have an adverse effect on water supplies.

Please identify any nearby natural resources (ponds, streams, vernal pools, etc.) and describe whether your project could have an impact on any of those resources and the steps you are taking to prevent any such impact. If you are removing any vegetation or doing any site work, describe those plans and what erosion or sedimentation control procedures you will be taking. If your project could have runoff or leaching, identify the nearby wells and resources that could be impacted and the measures you are taking to prevent any impact.

Why your project won't result in sedimentation or erosion:

Why your project won't have an adverse effect on water supplies:

Relevant documents:

E. Scale & Intensity of Use: The proposed use will be compatible with existing uses in the neighborhood, with respect to physical size, visual impact, intensity of use, and proximity to other structures.

Please include a description of the types of surrounding uses (residential, home businesses, commercial businesses, farms, etc.), how close they will be to your project, and whether and how much those surrounding uses will be able to see your operations. Describe how your project fits in with the neighborhood and identify any screening or other steps you will take to minimize the impact on surrounding uses.

Why your project will be compatible with surrounding uses:

Relevant documents:

F. Noise & Hours of Operation: The proposed use will be compatible with existing uses in the neighborhood, with respect to the generation of noise and hours of operation.

Please describe your hours of operation and any noise that your use may generate. Describe the impact those hours and noise could have on surrounding uses and how your use will not be incompatible with the surrounding uses.

Why your project will be compatible with existing uses in terms of noise and hours of operation:

Relevant documents:

G. Right, Title, or Interest: The applicant has sufficient right, title or interest in the site of the proposed use to be able to carry out the proposed use.

Identify the type of right, title, and interest that you hold in the property (deed, purchase and sale agreement, lease, easement, etc.).

Right, title, and interest:

Relevant documents:

H. Financial & Technical Ability: The applicant has the financial and technical ability to meet the standards of this Section and to comply with any conditions imposed by the Planning Board pursuant to subsection 7.5.

Please identify the cost of the project and any required compliance measures. Provide evidence that you have the financial capacity to meet those standards. Please also identify the experience that you have with the type of proposed use. If your project involves building construction and/or site development, what types of professional services have you or will you employ to address technical design issues like wetland mapping and storm drainage analysis? Who will be inspecting the work to ensure that it meets required regulatory performance standards and industry quality standards? The details of construction and financial & technical capacity will be reviewed during site plan approval (if required), but a general indication and discussion is needed for conditional use review and also for implementation of required conditions of approval (if any).

Estimated cost of the project and compliance:

Evidence of financial capacity:

Evidence of technical capacity:

Relevant documents:

PART IV. SPECIFIC PERFORMANCE STANDARDS

Per Section 7.4.B., please identify any additional performance standards contained in the Land Use Ordinance that apply to your project and identify how you meet those standards (add additional standards/sheets as required). As an example, if your project is a campground, you need to document how you meet the specific standards of Section 5.8 as well as the general criteria for a conditional use review. If your project requires separate site plan review and approval, you can address the site plan performance standards in your site plan application.

A. Specific Standard: (Section Reference)

Performance standard:

How you meet that standard:

Relevant documents:

EXHIBIT 2 PROJECT APPROVALS

MPUC CPCN Approval

STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2017-00232

May 3, 2019

CENTRAL MAINE POWER COMPANY
Request for Approval of CPCN for the
New England Clean Energy Connect
Consisting of the Construction of a 1,200
MW HVDC Transmission Line from the
Québec-Maine Border to Lewiston
(NECEC) and Related Network Upgrades

ORDER GRANTING
CERTIFICATE OF PUBLIC
CONVENIENCE AND
NECESSITY AND APPROVING
STIPULATION

VANNOY, Chairman; WILLIAMSON and DAVIS, Commissioners

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I. SUMMARY

The Commission finds that the construction and operation of the New England Clean Energy Connect (NECEC or Project) is in the public interest and, therefore, there is a public need for the Project. Accordingly, the Commission issues a certificate of public convenience and necessity (CPCN) for the NECEC. In addition, the Commission approves the Stipulation filed in this proceeding on February 21, 2019.

The Commission's finding that the NECEC meets the public interest and public need standards is based on a careful weighing of the benefits and costs of the NECEC to the ratepayers and residents of the State of Maine. As required by Maine statute, these include the effects of the NECEC on economics, reliability, public health and safety, scenic, historic and recreational values, and state renewable energy goals. 35-A M.R.S. § 3132(6). Based on its consideration of these factors, the Commission finds that the NECEC is in the public interest.

The Commission concludes that the NECEC meets the applicable statutory standards for a CPCN independent of the additional benefits that will be conveyed by the February 21, 2019 Stipulation. However, the provisions of the Stipulation augment the benefits of the Project.

The NECEC will allow for up to 1,200 MW of hydropower to be delivered to New England from Québec, Canada. The cost of constructing and operating the NECEC will be borne by customers of Electric Distribution Companies in Massachusetts (MA EDCs) and Hydro Québec (HQ). Because the NECEC-enabled power will be delivered into Maine, however, significant benefits will accrue to Maine electricity consumers through operation of the regional wholesale market. These benefits are expected to accrue for a period of at least 20 years. In addition to the wholesale electricity price reductions that will result from the NECEC, the Project will also enhance system reliability and fuel security within Maine and the ISO-New England (ISO-NE) region. In addition, the NECEC will provide environmental benefits by displacing fossil fuel generation in the region, and associated greenhouse gas (GHG) production, and will provide substantial benefits to the Maine economy through the more than 1,600 jobs expected to be created during the NECEC construction phase, and on an ongoing basis through property taxes.

The provisions of the NECEC Stipulation augment the benefits that will be realized by Maine ratepayers, communities and the environment by funding mechanisms and programs to provide rate relief to Maine ratepayers, benefits for low-income customers, and support for a variety of other programs intended to benefit Maine communities and the environment.

With respect to the effects of the Project on scenic and recreational values, and the associated impacts on tourism and the economies of communities in proximity to the Project, the Commission finds that these effects will be adverse. However, when these adverse impacts are balanced against the ratepayer, economic, and environmental benefits of the NECEC, the Commission finds that these adverse effects are

outweighed by the benefits. Moreover, the Commission expects that the scenic and recreational impacts of the NECEC will be reviewed and, to the extent appropriate and feasible, mitigated, through the processes at the Maine Department of Environmental Protection (DEP) and Land Use Planning Commission (LUPC).

Figure I.1 provides a summary of the impacts to Maine of the NECEC and the Stipulation provisions:

Figure I.1

Summary of NECEC Impacts			
Wholesale Market Effects	Description	Value to Maine	
		Nominal	Present Value
Energy Market Prices	Energy price suppression effect	\$14-\$44 million annually	\$122-\$384 million
Capacity Market Effect	Estimated capacity market price reduction	\$19 million annually for first 10 years	\$101 million
Reliability and Fuel Security	Enhancements to transmission reliability and supply reliability and diversity	Not quantified*	Not quantified*
Macroeconomic Effects	Description	Value to Maine	
		GDP is reported in chained 2009 dollars	
During Construction Period	Positive impact on Maine GDP	Annual average, 2017-2022: \$94-\$98 million	
During Operations	Positive impact on Maine GDP. Includes effect of wholesale energy and capacity market savings.	Annual average, 2023-2027: \$25-\$29 million	
Regional Environmental and Local Community Impacts	Description	Value	
Effects on Host Communities	Detrimental impact on scenic, historic and recreational values, associated tourism and local economy	Not quantified	
GHG Emissions Reductions	Reduction in regional carbon emissions	3.0 to 3.6 million metric tons/year	
Stipulation Conditions	Description	Value to Maine	
		Nominal	Present Value
Stipulation provisions	Benefits package included in Stipulation	Total \$250 million over 40 years	\$72-\$85 million

*As discussed in the Concurring Opinion of Commissioner Williamson, ISO-NE has provided estimates that suggest that fuel security and reliability benefits could provide value to Maine of approximately \$9.8 million annually for the years 2023-2024 and 2024-2025.

II. PROJECT BACKGROUND

A. NECEC Facilities

The NECEC will enable the delivery of up to 1,200 MW of hydroelectric power from Québec, Canada to New England for a period of at least 20 years. The expected commercial operation date of the NECEC is December 2022. The core elements of the Project are: (1) a new 320 kV overhead high voltage direct current (HVDC) transmission line, approximately 145 miles in length, from the Québec/Maine border to a new converter station in Lewiston, Maine and a new 1.6 mile 345 kV AC transmission line from the new converter station to Central Maine Power Company's (CMP) existing Larrabee Road Substation in Lewiston and (2) a new converter station at Merrill Road in

Lewiston (Merrill Road Converter Station) and certain required upgrades to the Larrabee Road Substation. The NECEC also includes several other upgrades to CMP's existing transmission lines and substations. As set forth in Appendix 1 of CMP's initial post-hearing brief, a complete list of the components that comprise the NECEC is listed in Sections II. B and II. C below.¹

B. Core Project Elements

1. Transmission Line Equipment

- New 145.3-mile +/-320 kV HVDC Transmission Line from the Canadian border to a new converter station located on Merrill Road in Lewiston (Section 3006) and
- New 1.6-mile 345 kV AC Transmission Line from the new Merrill Road Converter Station to the existing Larrabee Road Substation (Section 3007).

2. Substation Equipment

- New 345 kV AC to +/-320 kV HVDC 1200MW Merrill Road Converter Station and
- Additional 345 kV AC Transmission Line Terminal at the existing Larrabee Road Substation.

C. Network Upgrades

1. Transmission Line Equipment

- New 26.5-mile 345 kV AC Transmission Line from the existing Coopers Mills Road Substation in Windsor to the existing Maine Yankee Substation in Wiscasset (Section 3027);
- New 0.3-mile 345 kV AC Transmission Line from the existing Surowiec Substation in Pownal to a new substation on Fickett Road in Pownal (Section 3005);
- Rebuild of 9.3-mile 115 kV Section 62 AC Transmission Line from the existing Crowley's Substation in Lewiston to the existing Surowiec Substation;

¹ As noted in Ordering Paragraph 1 to this Order, the CPCN shall include and permit construction of any additional transmission facilities that ISO-NE determines are necessary to meet the requirements of Section I.3.9 of the ISO-NE Transmission Markets and Services Tariff or ISO-NE's Capacity Capability Interconnection Standard without further Commission review.

- Rebuild of 16.1-mile 115 kV Section 64 AC Transmission Line from the existing Larrabee Road Substation to the existing Surowiec Substation;
- Partial rebuild of 0.8 miles each of 115 kV Sections 60 and 88 AC Transmission Lines outside of the Coopers Mills Road Substation;
- Partial rebuild of 0.3 miles of 345 kV Section 392 AC Transmission Line between the Coopers Mills Road Substation and the Maine Yankee Substation and approximately 3.5 miles of reconductor work on existing double circuit lattice steel towers outside of the Maine Yankee Substation;
- Partial rebuild of 0.3 miles of 345 kV Section 3025 AC Transmission Line between the Coopers Mills Road Substation and the Larrabee Road Substation; and
- Partial Rebuild of 0.8 miles of 34.5 kV Section 72 AC Transmission Line outside of the Larrabee Road Substation.

2. Substation Equipment

- Replace existing Larrabee Road 345/115 kV 448MVA autotransformer with a 600MVA autotransformer;
- Additional 345 kV AC Transmission Line Terminal at the existing Maine Yankee Substation;
- Additional 345 kV AC Transmission Line Terminal and 115 kV switch replacements at the existing Surowiec Substation;
- 115 kV switch and bus wire replacements at Crowley's Substation;
- New 345 kV Fickett Road Substation with 345 kV +/-200MVAR Static Compensator (STATCOM);
- Additional 345 kV AC Transmission Line Terminal and additional 345 kV +/-200MVAR STATCOM (+/-400MVAR total with the +/-200MVAR existing) at the existing Coopers Mills Road Substation; and
- Additional 345/115 kV 448MVA Autotransformer, associated 115kV buswork and terminate existing 115 kV Sections 164, 164A, and 165 into 3 new breaker-and-a-half bays at the existing Raven Farm Substation.

The NECEC's proposed route is on private land that CMP owns or controls, including existing corridors for more than half its length. The proposed corridor for the new HVDC transmission line portion of the NECEC extends approximately 145.3 miles

from the Québec-Maine border at Beattie Township, in northern Franklin County, to the Larrabee Road Substation in Lewiston. Additionally, the Project includes upgrades to existing AC network facilities in various locations on CMP's existing transmission system.

The northern portion of the HVDC line is proposed to be built in currently undeveloped corridor primarily traversing commercial forest land, and the remainder of the corridor will be built within the undeveloped width of existing transmission corridors. The corridor begins in western Maine in Beattie Township (Franklin County) and extends southeast for about 4½ miles across Beattie Township, touches the southwest corner of Lowelltown Township (Franklin County) and then extends easterly about 27 miles across Skinner Township (Franklin County), then across Appleton Township, Raytown Township, Hobbstown Township, Bradstreet Township, and across the southwest corner of Parlin Pond Township (all in Somerset County). From that point, the corridor crosses onto Johnson Mountain Township extending southerly about 6½ miles over the approach to Coburn Mountain and into the valley between Coburn Mountain and Johnson Mountain and then turning east for about 2½ miles to the U.S. Route 201. Between the border and U.S. Route 201, the corridor is a 300-foot wide parcel.

The 300-foot wide corridor continues south across West Forks Plantation about 4¾ miles to the Kennebec River and the West Forks Plantation/Moxie Gore line (all in Somerset County). From the Kennebec River, the 300-foot wide corridor extends about 49 miles southeast across Moxie Gore and the Forks Plantation to the intersection with an existing transmission corridor near the Lake Moxie Road. The remaining section of the NECEC will be constructed on the existing corridor.

The estimated cost of the NECEC is approximately \$1 billion. As noted above, these costs will be paid for entirely by H.Q. Energy Services (U.S.) INC. (HQUS) and the MA EDCs.

D. Massachusetts RFP Process and Results

The NECEC is a component of a bid prepared jointly by CMP and Hydro Renewable Energy Inc. (HRE), an affiliate of Hydro-Québec, that was submitted in response to a Request for Proposals (RFP) issued by the MA EDCs pursuant to Section 83D of the 2008 Massachusetts Green Communities Act (Green Communities Act). Pursuant to the Green Communities Act, on March 31, 2017, NSTAR Electric Company d/b/a Eversource Energy (Eversource), Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid (National Grid) and Fitchburg Gas and Electric Light Company d/b/a Unitil (Unitil), in coordination with the Massachusetts Department of Energy Resources (DOER), issued an RFP seeking bids to provide incremental clean energy and associated environmental attributes for approximately 9.45 TWh annually under long-term contracts of 15-20 years. The RFP set a proposal due date of July 27, 2017.

Forty-six bid packages² were received on or by the due date, including joint bids submitted by CMP and HRE³ offering two different NECEC configurations. Following an evaluation process by the MA EDCs and DOER, on January 25, 2018, an all-hydroelectric bid submitted by HRE and Northern Pass Transmission LLC (Northern Pass) was selected for contract negotiations. On February 1, 2018, the New Hampshire Site Evaluation Committee (NHSEC) denied the Northern Pass siting permit. On February 17, 2018, CMP was notified that the NECEC had been selected as the alternate winning bid.

The contractual arrangements underlying the NECEC include power purchase agreements (PPA) between HQUS (the successor to HRE) and each of the purchasing utilities in Massachusetts and transmission services agreements (TSA) between CMP and the MA EDCs and between CMP and HQUS. The PPAs and the TSAs were filed for approval with the Massachusetts Department of Public Utilities (DPU) on July 23, 2018.⁴ The Massachusetts DPU proceedings are on-going. In addition, CMP filed the TSAs for approval by the Federal Energy Regulatory Commission (FERC) and, on October 19, 2018, the TSAs were accepted by FERC to become effective October 20, 2018.⁵

As shown in Figure II.1, the PPAs are for different amounts of capacity, totaling 1,090 MW of the 1,200 MW capacity of the NECEC, and all extend for a 20-year term.

² The 83D bids can be viewed at <https://macleanenergy.com/83d/83d-bids/>.

³ HRE was proposed as a new U.S. affiliate of Canadian-based Hydro-Québec created for purposes of the Section 83D RFP. Ultimately, Hydro-Québec decided to have its existing U.S. affiliate, HQUS, serve as the counterparty for the NECEC PPAs and TSAs.

⁴ *Commonwealth of Massachusetts, Department of Public Utilities*, Petition of NSTAR Electric Company d/b/a Eversource Energy for Approval of Proposed Long Term Contracts for Clean Energy Projects Pursuant to Section 83D of An Act Relative to Green Communities, St. 2008, c. 169, as amended by St. 2016, c. 188, § 12, Docket No. D.P.U. 18-64; Petition of Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid for Approval of Proposed Long Term Contracts for Clean Energy Projects Pursuant to Section 83D of An Act Relative to Green Communities, St. 2008, c. 169, as amended by St. 2016, c. 188, § 12, Docket No. D.P.U. 18-65; and Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil for Approval of Proposed Long-Term Contracts for Clean Energy Projects pursuant to Section 83D of An Act Relative to Green Communities, St. 2008, c. 169, as amended by St. 2016, c. 188, § 12, Docket No. D.P.U. 18-66. (MA EDC Petitions).

⁵ *Central Maine Power Company*, 165 FERC ¶ 61, 034 (2018).

Figure II.1

Power Purchase Agreements				
Counterparties		MW	Years	Reference
HQUS	Eversource	579.3	1-20	NEXRE-002-006, Attachment 1
HQUS	National Grid	498.3	1-20	Exhibit NECEC-16
HQUS	Unitil	12.3	1-20	NEXRE-002-006, Attachment 2

As shown in Figure II.2, there are seven different TSAs with CMP, three corresponding to the capacity and term of the PPAs with the MA EDCs. Three additional TSAs correspond to the capacity of the PPAs with the MA EDCs, but are between CMP and HQUS for years 21-40 of the expected life of the NECEC line. The final TSA is a 40-year agreement between CMP and HQUS for the remaining 110 MW of the line.

Figure II.2

Transmission Services Agreements				
Counterparties		MW	Years	Reference
CMP	Eversource	579.3	1-20	Exhibit NECEC-17
CMP	National Grid	498.3	1-20	Exhibit NECEC-18
CMP	Unitil	12.3	1-20	Exhibit NECEC-19
CMP	HQUS	579.3	21-40	Exhibit NECEC-20
CMP	HQUS	498.3	21-40	Exhibit NECEC-21
CMP	HQUS	12.3	21-40	Exhibit NECEC-22
CMP	HQUS	110.0	1-40	Exhibit NECEC-23

The PPAs and TSAs contain customary commercial terms and conditions and include provisions specific to the Green Communities Act and Section 83D solicitation. Generally, the PPAs provide for the delivery of an aggregate of 9,554,940 MWh annually of incremental hydroelectric generation and related Environmental Attributes from HQUS delivered through the NECEC Transmission Line to the delivery point in Lewiston, Maine. Each PPA also includes a methodology by which baseline and incremental energy deliveries are calculated.⁶ The PPAs also include provisions for reimbursement from HQUS for failure to meet delivery obligations. The PPAs do not

⁶ Specifically, the baseline hydroelectric delivery volume in the National Grid PPA is based on an initial 9.45 TWh volume subject to certain potential adjustments, while the Eversource and Unitil initial annual volume is 3 TWh, adjusted only for *force majeure* events.

include an obligation on the part of HQUS to obtain a Capacity Supply Obligation (CSO) in the ISO-NE Forward Capacity Market (FCM). The TSAs provide the terms by which the MA EDCs will purchase firm transmission service from CMP for the delivery of energy into New England over the NECEC line. Commercial operations under both the PPAs and the TSAs is expected to be no later than December 2022.⁷

III. PROCEDURAL BACKGROUND

A. Petition

On September 27, 2017, CMP filed its Petition for a CPCN, pursuant to 35-A M.R.S. § 3132(6) and Chapter 330 of the Commission Rules, to construct the NECEC, an HVDC transmission line from the Maine-Québec border at Beattie Township to Lewiston, Maine that would be capable of delivering 1,200 MW of electricity from Québec to the ISO-NE grid (CMP Petition).

On October 3, 2017, the Hearing Examiners issued a Notice of Proceeding that provided all interested persons with the opportunity to file a petition to intervene in this matter on or before October 13, 2017.

B. Intervention

The Commission received the following timely-filed petitions to intervene that were granted by the Hearing Examiners: The Office of the Public Advocate (OPA), the Industrial Energy Consumer Group (IECG), the Conservation Law Foundation (CLF), Ms. Dorothy Kelly, the Maine Renewable Energy Association (MREA), the Natural Resources Counsel of Maine (NRCM), and Western Mountains and Rivers Corporation (WM&RC).

Throughout the proceeding, the Commission also received numerous late-filed petitions to intervene. The Hearing Examiners granted all such requests for intervention on either a mandatory or discretionary basis by procedural orders dated November 27, 2017; March 28, 2018; April 27, 2018; August 28, 2018; September 6, 2018; October 2, 2018; October 11, 2018; October 15, 2018; and October 29, 2018. The intervenors in this proceeding that submitted late-filed petitions to intervene are the Governor's Energy Office (GEO), NextEra Energy Resources, LLC (NextEra), RENEW Northeast, Inc. (RENEW); Calpine Corporation, Vistra Energy Corporation (formerly known as Dynegy Inc.), and Bucksport Generation LLC (Calpine, Vistra, and Bucksport hereinafter collectively referred to as "GINT"; the Acadia Center; Friends of Maine Mountains (FMM); ReEnergy Biomass Operations LLC (ReEnergy); International Brotherhood of Electrical Workers Local Union 104 (IBEW); City of Lewiston (Lewiston); Town of Caratunk (Caratunk); Maine Chamber of Commerce (Chamber); Town of Farmington; Greater Franklin Development Council (GFDC); Trout Unlimited; Former Senator

⁷ MA EDC Petitions, Joint Direct Testimony of Jeffery S. Waltman, Timothy J. Brennan and Robert S. Furino, July 23, 2018 at 15, 36-37.

Thomas Saviello; Darryl Wood; Town of Alna; Town of Wilton; Town of New Sharon; Old Canada Road National Scenic Byway, Inc. (Old Canada Road); Town of Jackman; and Terry Brann.

C. Testimony, Discovery, Hearings

A variety of witnesses testified on behalf of CMP and intervenors in this proceeding. Written discovery was conducted and technical conferences were held after every phase of testimony.

The following prefiled testimony was submitted:

On January 26, 2018, Ms. Kelly submitted intervenor testimony.

On April 1, 2018, Ms. Kelly submitted additional intervenor testimony.

On April 30, 2018, GINT submitted direct intervenor testimony from Tanya L. Bodell, William S. Fowler, and James M. Speyer; NextEra submitted intervenor testimony from Christopher Russo and Stephen Whitley; and RENEW submitted intervenor testimony from Francis Pullaro.

On May 21, 2018, the Commission Staff filed a London Economics International (LEI) Report (LEI Report) on electricity market and macroeconomic benefits of the NECEC.

On July 13, 2018, CMP filed Rebuttal Testimony from Thorn Dickinson, Eric Stinneford, and Bernardo Escudero (Business and Policy Panel) (2) Chris Malone, Scott Hodgdon, and Justin Tribbet (Transmission Planning and Engineering Panel); and (3) Daniel Peaco, Douglas Smith, and Jeffrey Bower of Daymark Energy Advisors (Daymark).

On August 18, 2018, GINT submitted Surrebuttal Testimony of Tanya L. Bodell and William S. Fowler; and NextEra submitted Surrebuttal Testimony of: (1) Christopher Russo; (2) Robert Stoddard; and (3) Stephen Whitley, Dan Mayers, and Francis Wang.

On September 10, 2018, the Commission Staff submitted a memo prepared by LEI (LEI MOPR Memo) in response to the NextEra Surrebuttal Testimony regarding the Minimum Offer Price Rule (MOPR).

The Commission held evidentiary hearings in this matter on October 19, 2018 (LEI) and on October 22, 2018 (CMP Transmission Planning and Engineering Panel and NextEra witnesses Whitley, Wang and Mayer).

On October 26, 2018, at the request of the intervenors, the Hearing Examiners suspended the remaining evidentiary hearings until January 2019 to allow the Commission Staff and parties additional time to review and analyze the documents that CMP produced in response to ODR-014-004.

On December 10, 2018, GINT filed Supplemental Testimony from Tanya Bodell and William Fowler regarding the MOPR analysis. NextEra also filed Supplemental Testimony from Christopher Russo and LEI filed a Supplemental MOPR Memo.

The Commission held the remaining evidentiary hearings on January 8, 2019 (GINT witnesses Tanya Bodell and James Speyer); January 9, 2019 (CMP Business and Policy Panel witnesses Thorn Dickinson, Eric Stinneford and Bernardo Escudero); January 10, 2019 (CMP Transmission Planning and Engineering witnesses Christopher Malone, Scott Hodgdon and Justin Tribbet, and Daymark witnesses Daniel Peaco, Douglas Smith, and Jeffrey Bower); and January 11, 2019 (NextEra witnesses Christopher Russo and Robert Stoddard; and GINT witness Tanya Bodell).

The Commission convened three public witness hearings, each of which were noticed in advance by procedural order. The Commission held the first two public witness hearings on September 14, 2018 in Farmington and The Forks Plantation. The Commission held the third public witness hearing on October 17, 2018 at the Commission's offices in Hallowell. A total of 116 witnesses testified at these three public witness hearings. Twenty witnesses testified in support of the NECEC, 93 spoke in opposition to the Project, and three witnesses testified neither for nor against the Project.

D. Briefs and Public Comments

On February 1, 2019, CMP, OPA, IECG, GINT, NextEra, CLF, NRCM, Acadia Center, Caratunk, Lewiston, IBEW, Chamber, Ms. Kelly, RENEW, and WM&RC filed initial briefs and on February 13, 2019, CMP, OPA, IECG, GINT, NextEra, Caratunk, and Ms. Kelly filed reply briefs.

In their initial briefs, CMP, IECG, OPA, Chamber, Lewiston, IBEW, and WM&RC argue that the Commission should find a public need for the NECEC and issue a CPCN. These parties argue that the NECEC will lower regional energy and capacity costs, provide needed infrastructure to enhance the resilience of the grid, result in the export of clean hydropower generation from Québec into New England, and provide economic benefits through increased tax revenue and employment. The IECG and OPA's support for the Project is conditioned on CMP transferring the NECEC into an affiliate, or special purpose entity (SPE) to construct, own and operate the NECEC line and that Maine ratepayers be held harmless from the prior inclusion of costs arising from NECEC in regional or local transmission rates.

GINT, NRCM, NextEra, Caratunk, RENEW, and Ms. Kelly oppose the approval of the Project, arguing that CMP has not satisfied its burden to demonstrate that there is a public need for the NECEC. These intervenors argue that the NECEC is about an environmental policy initiated by another state (Massachusetts); it will not result in significantly lower electricity rates; it will not reduce GHG emissions, and could even result in increased emissions; its design will discourage the development of Maine-based wind and solar renewable generation; and it will permanently damage scenic,

historical, and recreational values in western Maine and result in a substantial loss of tourism. RENEW states that any approval of the Project should be conditioned on CMP increasing the transfer capability on the Surowiec-South interface.

CLF and Acadia Center argue that the Commission should require CMP to commit to a significantly more robust Project benefits package that includes substantial financial, resource and planning commitments that will, among other things, advance Maine's renewable energy goals, Maine's economy, and Maine's public health. Specifically, the Commission should require the Project to mitigate potential impacts on existing and future Maine-based renewables and to do more to advance the public health in Maine, including substantial financial contributions toward the decarbonization and electrification of Maine's transportation and heating sectors, including toward the expansion of electric vehicle and electric heat pumps.

In addition to the party arguments presented in the briefs, the Commission received over 1,350 public comments. Most of the public comments oppose the NECEC, primarily on the grounds the Project will result in irreparable harm to the environment and scenic values of western Maine, harm to wildlife, and negative impacts on regional tourism.

E. Stipulation

On February 21, 2019, CMP filed a Stipulation and supporting memorandum in this case. The Stipulation is supported by OPA, GEO, IECG, CLF, Acadia Center, WM&RC, Lewiston, the Chamber, IBEW, and FMM. The following parties oppose the Stipulation: NextEra; Ms. Kelly; GINT; NRCM; RENEW; MREA; ReEnergy; Caratunk; Former Senator Thomas Saviello, the Town of Wilton, and Old Canada Road.

On a February 21, 2019, a Procedural Order was issued that provided parties an opportunity to provide written comment on the Stipulation. Written comments were filed by GFDC, FMM, Caratunk, IBEW, NRCM, the Chamber, RENEW/MREA, Ms. Kelly, ReEnergy, CLF/Acadia Center, IECG/OPA, GEO, GINT, and Old Canada Road. A hearing was held on the Stipulation on March 7, 2019.

F. Examiners' Report

On March 29, 2019, an Examiners' Report was issued which contained Staff's recommendations on the issues in this proceeding. Exceptions or comments on the Examiners' Report were filed on April 8, 2019 by the following parties: ReEnergy, IECG, GINT, NRCM, WM&RC, Caratunk, CMP, NextEra, and Ms. Kelly.

IV. **STATUTORY REQUIREMENTS**

The governing statute in this proceeding is Title 35-A, Section 3132. This Section states that "a person may not construct any transmission line ... unless the commission has issued a certificate of public convenience and necessity approving construction." Section 3132(6) requires that, in its Order, the Commission "shall make

specific findings with regard to the public need for the proposed transmission line.” The Section also states that the Commission “shall make specific findings with regard to the likelihood that nontransmission alternatives can sufficiently address the identified public need over the effective life of the transmission line at lower total cost.”

Specifically, Section 3132(6) requires that:

In determining public need, the commission shall, at a minimum, take into account economics, reliability, public health and safety, scenic, historic and recreational values, state renewable energy generation goals, the proximity of the proposed transmission line to inhabited dwellings and alternatives to construction of the transmission line, including energy conservation, distributed generation or load management.

Chapter 330 of the Commission’s Rules, Section 9(B), specifies that a “public need” is established upon a determination that “ratepayers will benefit by the proposed line” taking into account the statutory criteria cited above.

In recognition of the unique nature of this proceeding, the Hearing Examiners, on January 14, 2019, issued a Procedural Order identifying several specific legal issues for the parties to address in post-hearing briefs. The Commission discusses these legal issues and various requirements of Section 3132(6) below.⁸

A. Public Need

As stated above, Section 3132(6) provides, in part, that the Commission shall make specific findings with regard to the public need for the proposed transmission line and, if the Commission finds that a public need does exist, it must issue a CPCN. In determining public need, the Commission is directed to consider a number of factors. However, the terms “public need” and “public convenience and necessity” are not expressly defined in the statute.

In a typical CPCN proceeding, a Transmission and Distribution (T&D) utility identifies a reliability need and proposes a transmission project to address that need. The Commission then examines the extent of the reliability need and whether the proposed project is the lowest-cost means to address what is a “public need.” In contrast, the NECEC is not proposed to address an identified reliability need, but rather to import power from Québec through Maine to meet a public policy of Massachusetts.

The January 14, 2019 Procedural Order asked the parties to address:

⁸ The issues identified in the January 14, 2019 Procedural Order included the applicability of Title 35-A, Section 707 and Chapter 820 of the Commission’s Rules with respect to housing the project in a separate corporate affiliate and good will payments. Provisions included in the Stipulation address these matters; accordingly, the Commission does not address these legal issues in this Order.

How should the “public need” standard pursuant to section 3132(6) be considered and evaluated in the context of the NECEC as opposed to the more typical reliability transmission project?

1. Positions of the Parties

CMP, IECG, and WM&RC argue that, in determining whether the public need has been met, the statute does not preclude the Commission from considering the impact of these various factors on the broader region, including other New England states or needs specified by the Massachusetts solicitation. CMP Initial Br. at 8-15; IECG Initial Br. at 11-12; WM&R Initial Br. at 4-5. CMP, IECG and IBEW argue that “public need” is analogous to a “public benefit” or “public welfare,” which is a flexible concept that requires a balancing of the benefits of the Project against its costs and risks. CMP Initial Br. at 5-8; IECG Initial Br. at 11-14; IBEW Initial Br. at 2-3. The OPA takes the position that the term “public need” is broad enough to encompass funds provided to Maine communities and citizens to mitigate any harms that could flow from the construction and operation of the NECEC. OPA Initial Br. at 19-22.

GINT and Caratunk argue that the Commission should only focus on whether the NECEC meets a Maine public need in that it must be assumed that the Maine law governing the approval of electric transmission projects in Maine was not designed to accommodate a public need in another state. GINT Initial Br. at 73-76; Caratunk Initial Br. at 7-9. NextEra argues, that, in interpreting public need, the Commission should not approve the NECEC if it conflicts with one or more of the statutory criteria. NextEra Initial Br. at 2-4.

2. Discussion

Section 3132 does not define what constitutes a “public need.” However, the meaning of public need in the context of a public convenience and necessity proceeding is established in case law. The Law Court has recently construed “public convenience and necessity” as being synonymous with “public benefit” or “public interest.” *Enhanced Communications of Northern New England, Inc. v. Public Utilities Commission*, 2017 ME 178, at fn. 4; *See also Zachs v. Department of Public Utilities*, 547 N.E.2d 28, 32 (Mass. 1989) (holding that the phrase “public convenience and necessity” is a term of art that stands for the general notion of public interest).

Thus, the “public need” standard in this case is essentially a general standard of meeting the public interest. A determination of “public interest” generally requires a careful weighing of the benefits and costs of the Project, including those that are quantifiable and those that are not. With respect to whether the “public” includes regions beyond Maine, the Commission interprets the statutory public interest standard to pertain to Maine. In this case, the standard involves consideration of the benefits and costs of the NECEC to Maine’s ratepayers and residents, rather than its role in meeting energy policies in another state. Finally, the Commission disagrees that every factor identified in the statute for consideration by the Commission must be satisfied or

promoted for a “public need” determination to be made, as long as, on balance, the overall benefits of the Project outweigh the costs.

B. Nontransmission Alternatives (NTA)

Title 35-A, Section 3132(2-D) requires that the Commission “consider the results of an investigation by an independent 3rd party... of nontransmission alternatives to construction of the proposed transmission line.” In addition, Section 3132(6) states that the Commission “shall make specific findings with regard to the likelihood that nontransmission alternatives can sufficiently address the identified public need over the effective life of the transmission line at lower total cost.”

In the January 14, 2019 Procedural Order, the Hearing Examiners asked parties to address:

How should section 3132(2-D), which states that the Commission shall consider the results of an independent third-party investigation of nontransmission alternatives to the proposed transmission project, be considered in the context of the NECEC as opposed to a reliability transmission project?

1. Positions of the Parties

CMP, IECG, OPA, Acadia Center, CLF, and WM&RC argue that the statutory provisions were drafted under an expectation that a proposed transmission line is being constructed either for reliability purposes or to provide Maine with energy, as historically has been the case. CMP Initial Br. at 166-169; IECG Initial Br. at 17-18; OPA Initial Br. at 23-24; Acadia Center Initial Br. at 4; Kelly Initial Br. at 8-9, NextEra Initial Br. at 6-8. In this case, the public need is to deliver hydroelectric energy from Québec to Massachusetts. In addition, these parties note that, because the NECEC will not be paid for by Maine ratepayers, there cannot be a lower-cost NTA alternative.

NRCM, NextEra, GINT, and Ms. Kelly argue that nothing in the statute exempts a project with no reliability component, like the NECEC, from the requirement of a CPCN applicant to conduct an NTA investigation. NRCM Initial Br. at 5-7; NextEra Initial Br. at 6-8; GINT Initial Br. at 76-78; Kelly Initial Br. at 8-9. Therefore, an investigation must be conducted in this proceeding to determine whether an NTA can economically and reliably address the public need identified for the NECEC.

2. Discussion

The Commission concludes that, because there is no NTA that can feasibly substitute for the NECEC, the statute does not require that an independent analysis of the costs of potential NTAs be conducted. The purpose of the NECEC is to transmit hydroelectric generation from Québec to New England to meet the requirements of the MA EDCs. Thus, no NTA, whether large-scale generation, distributed generation, demand response resource, or conservation alternative, can replace the NECEC. A

contrary interpretation of the statute that would require an NTA analysis would lead to absurd results and cannot be the intent of the Legislature. *Town of Madison, Dep't. of Elec. Works v. Pub. Utils. Comm'n*, 682 A.2d 231, 234 (Me. 1996) (plain meaning will be applied so long as it does not lead to an absurd, illogical, or inconsistent result).⁹

This conclusion is consistent with the Commission's decision in Docket No. 2010-00180 that approved a stipulation and issued a CPCN allowing CMP to construct a transmission line reinforcement, despite the absence of an NTA analysis. In that proceeding, the Commission held that an NTA was "not feasible," because it required adding load behind an identified export constraint, and CMP could not "force the location of customers." *Central Maine Power Company and Public Service Company of New Hampshire, Request for Certificate of Public Convenience and Necessity for the Somerset County Reinforcement Project Consisting of the Construction of Approximately 39 miles of 115 kV Transmission Lines ("Section 241")*, Docket No. 2010-00180, Order Approving Stipulation at 10-11 (Aug. 15, 2011).

C. Public Health and Safety, Scenic, Historic and Recreational Values

The January 14, 2019 Procedural Order asked parties to address the following issue:

Based upon the assumption that the Legislature did not intend that the Commission duplicate the functions of the Department of Environmental Protection (DEP), how should the requirement in section 3132(6) that the Commission consider "public health and safety, scenic, historic and recreational values" be interpreted and applied? Is the interpretation and application of this requirement different in the context of the NECEC as opposed to a reliability transmission project?

1. Positions of the Parties

CMP, IECG, WM&RC, and IBEW argue that the Commission should defer to the DEP and the LUPC, with respect to issues relating to public health and safety, scenic, historic and recreational values, and that approval may be conditioned on future receipt of all necessary permits and approvals from such agencies. CMP Initial Br. at 16-25; IECG Initial Br. at 14-15; WM&R Initial Br. at 14-15; IBEW Initial Br. at 3-4. Sections 3132(6), (7), and (8) provide the Commission an opportunity to consider the findings of the DEP with respect to any modifications ordered by the DEP and contemplates an iterative process, if necessary, in which the Commission would review the DEP's findings if it imposes additional costs on the project. In this manner, redundant and potentially inconsistent project reviews by State agencies can be avoided.

⁹ The Commission notes that, even if an NTA could meet the identified public need, such an alternative could not do so at a lower total cost to Maine customers because Maine customers will not pay for the NECEC.

NRCM, CLF, Acadia Center, NextEra, GINT, and Caratunk argue that the Commission does not have to duplicate the specific responsibilities of DEP and LUPC and is the only regulatory agency that can adequately consider the overall impacts to Maine's "public health and safety, scenic, historic and recreational values" in the context of a broader cost-benefit analysis. NRCM Initial Br. at 4-5; CLF Initial Br. at 10-13; Acadia Center Initial Br. at 3; NextEra Initial Br. at 4; GINT Initial Br. at 74-76; Caratunk Initial Br. at 9-11. DEP and LUPC only focus on their specific statutory criteria, which do not include energy market issues and ratepayer impacts. Moreover, there is no language in the CPCN statute that authorizes the Commission to delegate its consideration of these statutory criteria to DEP. Finally, the Commission, the DEP and LUPC are charged with administering different statutes, and each agency is equipped to administer its duties with different standards of review.

2. Discussion

In the typical reliability project, the Commission would first consider whether there is a public need for the proposed transmission line. Upon such a finding, the Commission would then review the other statutory considerations, including the need to mitigate impacts on such things as public health and safety, scenic, historic, and recreation value.

To interpret the statutory language in the context of the current proceeding, and upon the assumption that the Legislature did not intend duplication among State agencies, the Commission examines the statutory authority and functions of Maine's DEP and LUPC. This examination reveals different types of reviews undertaken by the various agencies. While the Commission's review of these statutory criteria is in the context of whether the utility has met its burden of showing there is a public need for the project, DEP's review of similar criteria is different in that it considers whether the utility has shown that its project (1) does not unreasonably interfere with existing scenic, aesthetic, and recreational uses, among others and (2) whether the utility has shown that it "has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character" 38 M.R.S §§ 480-D, 484. The LUPC's role is to determine, among other things, whether there is no alternative site which is both suitable to the proposed use and reasonably available to the applicant and that the use can be buffered from those other uses and resources for which it is incompatible.

In addition, the statutory scheme generally contemplates that the Commission's decision would occur prior to that of the DEP or LUPC. Thus, the overall statutory scheme can be read to contemplate that if the Commission does not grant the CPCN, such a determination eliminates the need for the DEP or LUPC to conduct their reviews. Accordingly, upon reviewing the applicable statutes together, the Commission finds that the evaluation of the NECEC by the Commission, the DEP, and LUPC are complementary and the evaluation of impacts, such as scenic and recreational values, can be accomplished without significant duplicating or overlapping reviews.

Thus, the Commission concludes that it is not appropriate for the Commission to defer to other agencies. Accordingly, the Commission must consider the impact of the NECEC on public health and safety, scenic, historic, and recreation values as part of its overall assessment of whether the NECEC is in Maine's public interest.

D. State Renewable Energy Generation Goals

The January 14, 2019 Procedural Order asked parties to comment on the following:

How should the requirement in section 3132(6) that the Commission consider "state renewable energy goals" be considered in the context of the NECEC?

- *Referring to the definitions of "renewable capacity resource" in section 3210(2)(B-3) and of "renewable resource" in section 3210(2)(C), should the hydroelectric generation to be transmitted over the NECEC be considered "renewable" for purposes of promoting "state renewable energy goals" under Maine law?*
- *Referring to the "State's goals for reduction of greenhouse gas emissions within the State" contained in Title 38, section 576, is this provision relevant to the consideration of the NECEC proposal and the associated hydroelectric power located in Canada?*
- *Are there other Maine statutory provisions that are relevant to the Commission's consideration of "state renewable energy goals" in this proceeding?*

1. Positions of the Parties

CMP argues that, although the NECEC-enabled generation does not fall within the definition of a renewable resource or a new renewable capacity resource under Title 35-A, because the NECEC energy will come primarily from dams with more than 100 MW of production capacity, the Project will provide many of the same benefits as hydroelectric power that satisfies Maine's definition of a renewable resource. CMP Initial Br. at 115-125. CMP asserts that the NECEC is a substantial source of clean, reliable baseload hydroelectric generation that diversifies the sources of electricity production for all of New England, including Maine, and reduces the region's and Maine's dependence on natural gas-fired generation. CMP argues, further, that the Commission may consider the extent to which the proposed Project will facilitate Maine's achievement of GHG emissions reduction targets set forth in 38 M.R.S., Section 576 (Climate Change Act). CMP Initial Br. at 163-165.

NRCM, GINT, Caratunk, and Ms. Kelly argue that the Commission should not consider hydroelectric generation transmitted over the NECEC from Québec to

Massachusetts as a renewable resource for the purposes of promoting “state renewable energy goals,” because it would not qualify as a “renewable capacity resource” under Section 3210(2)(B-3) or as a “renewable resource” under Section 3210(2)(C). NRCM Initial Br. at 4-7; GINT Initial Br. at 78-80; Caratunk Initial Br. at 17-19; Kelly Initial Br. at 9-12. In both instances qualifying generation is limited to capacity below 100 MW for hydroelectric generators, while most of Hydro Québec’s generation portfolio exceeds 100 MW. In addition, these parties argue that consideration of “state renewable energy goals” requires that the Commission take into account the goals as expressed in the Maine Wind Energy Act and the Maine Solar Energy Act, arguing that the NECEC would make it more difficult for the goals of these Acts to be achieved.

2. Discussion

Title 35-A, Section 3210 governs Maine’s renewable portfolio standards (RPS). Section 3210(1) states:

In order to ensure an adequate and reliable supply of electricity for Maine residents and to encourage the use of renewable, efficient and indigenous resources, it is the policy of this State to encourage the generation of electricity from renewable and efficient sources and to diversify electricity production on which residents of this State rely in a manner consistent with this section.

The statute specifies “hydroelectric generators” as a “renewable resource,” but limits the size of any RPS qualifying resource¹⁰ (except for wind power) to 100 MW or less. Title 35-A M.R.S. § 3210(2)(C)(f). Chapters 3-A (Climate Change) and 3-B (Regional Greenhouse Gas Initiative) of Title 38 address State policies and programs specifically related to GHG emissions. Chapter 3-A establishes GHG reduction targets for the State, and Chapter 3-B authorizes Maine’s participation in the Regional Greenhouse Gas Initiative (RGGI), which is a multi-state cooperative effort to cap and reduce CO₂ emissions from electric generators. Taken together, these statutory provisions include various renewable energy related goals, including supply diversity and reliability, and GHG emission reductions.

In addition, the Legislature has found that in-state hydropower makes a “significant contribution to the general welfare of the citizens of the State” in that it is a “large-scale energy resource which does not rely on combustion of a fuel, thereby avoiding air pollution, solid waste disposal problems and hazards to human health from emissions, wastes and by-products.” 38 M.R.S. § 631(1). For these reasons, the Commission finds that the promotion of incremental hydroelectric generation for import into the New England market supports the “state renewable energy generation goals” as set forth in Section 3132(6). As enumerated in the statutory provisions discussed above, these goals include promoting adequate, reliable, and diverse sources of electricity supply and GHG emission reductions.

¹⁰ The fact that hydropower facilities larger than 100 MW do not qualify for Maine’s RPS does not mean that they are not producing energy that is renewable.

The Commission also concludes that both the Maine Solar Energy Act, 35-A M.R.S. § 3472 *et. seq.* and the Maine Wind Energy Act, 35-A M.R.S. § 3402 *et. seq.*, are relevant to the Commission's consideration of "state renewable energy goals" in this proceeding. The Maine Solar Energy Act advances the goals of "[e]nsuring that solar electricity generation, along with electricity generation from other renewable energy technologies, meaningfully contributes to the generation capacity of the State through increasing private investment in solar capacity in the State." In furtherance of these and other goals, the Act creates a State policy of "encourag[ing] the attraction of appropriately-sited development related to solar energy generation, including any additional transmission, distribution and other energy infrastructure needed to transport additional solar energy to market . . . for the benefit of all ratepayers." Similarly, the Maine Wind Energy Act creates a state policy of "encourag[ing] the attraction of appropriately sited development related to wind energy" and establishes Maine's in-state wind goals of at least 3,000 MW of installed wind by 2020, and 8,000 MW of installed wind by 2030.

Thus, the question of whether the NECEC facilitates or hinders solar or wind resource development in Maine is an issue when considering whether the NECEC is in the overall public interest.

V. ANALYSIS OF NECEC IMPACTS

A. Electricity Market Price and Ratepayer Impacts

1. Overview

Based on the record in this proceeding, the Commission finds that the NECEC will result in substantial benefits to Maine electricity customers because of the effect it will have on reducing energy and capacity prices in the wholesale market. These market price benefits accrue to Maine customers due to the reductions in wholesale prices that will result from the delivery over the NECEC from Hydro Québec of a substantial amount of energy and capacity into the Maine Zone at the Larrabee Road Substation in Lewiston. As a contractual matter, the NECEC will deliver energy to the MA EDCs. As a *physical* matter, however, the beneficial effects of that energy will be realized directly by Maine consumers through lower electricity supply prices.

As discussed below, the record demonstrates that market price reduction benefits will result from the NECEC, notwithstanding the divergence among the experts and the parties with respect to their magnitude. Moreover, the record demonstrates that benefits will flow to Maine for a period of at least 20 years.

In addition, the Commission finds that the NECEC will enhance transmission reliability, and supply reliability and diversity in the region, and serve as a hedge against high and volatile natural gas prices.

2. Energy Market Impacts

a. Overview

The evidence in the record in this proceeding demonstrates that the NECEC will result in a reduction to wholesale energy prices in Maine and across the New England region. The wholesale energy benefits in Maine, as estimated by the Commission's expert, LEI, and CMP's expert, Daymark,¹¹ range from \$14 million to \$44 million dollars per year in nominal dollars, and the estimated net present value (NPV) benefits over the first 15 years of NECEC operations range from \$122 million to \$384 million (2023\$). LEI Report Figure 4.

b. Description of the Wholesale Energy Market

Maine is part of a regional electricity system and market operated and administered by ISO-NE. The rules of the energy market are set forth in ISO-NE Market Rule 1.¹² Energy prices in the ISO-NE market, referred to as "locational marginal prices" or "LMP", are comprised of three components: an energy component, a loss component, and a congestion component. Suppliers of energy to the market are paid the LMP applicable to their location, or "node", and entities that serve customer loads are charged the LMP applicable to the locational "zone" within which the load is located.

As described by the ISO-NE:

Locational marginal pricing is a way for wholesale electric energy prices to reflect the value of electric energy at different locations, accounting for the patterns of load, generation, and the physical limits of the transmission system....

An LMP is the price for electric energy at each load zone, external interface with neighboring regions, and the Hub that reflects (1) the operating characteristics of, and (2) the major constraints on, the New England transmission system at each area, as well as (3) the losses resulting from physical limits of the transmission system. The energy component of all LMPs is the price for electric energy at the "reference point," which is the load-weighted average of the system node prices...

¹¹ GINT provided an analysis of the energy market benefits of the NECEC using Calpine's UPLAN model during, but only for a single year of operation, 2023. Bodell Dir. Test. at 22.

¹² Information relating to ISO-NE's Market Rule 1 can be found at <https://www.iso-ne.com/participate/rules-procedures/tariff/market-rule-1>

The congestion component of a nodal LMP reflects the marginal cost of congestion at a given node or external node relative to the load-weighted average of the system node prices. The congestion component of a zonal price is the weighted average of the congestion components of the nodal prices that comprise the zonal price. The congestion component of the Hub price is the average of the congestion components of the nodes that comprise the Hub.

The loss component of an LMP at a given node or external node reflects the cost of losses at that location relative to the load-weighted average of the system node prices. The loss component of a zonal price is the weighted average of the loss components of the nodal prices that comprise the zonal price. The loss component of the Hub price is the average of the loss components of the nodes that comprise the Hub.¹³

Because prices paid to a generator/supplier for energy reflect the LMP at the generator's physical point of delivery, or node, they convey to the generator the value of its energy taking into account the effects of energy delivered at that node on losses and congestion. In particular, if delivery of energy at a given node would increase congestion and losses, the LMP paid to the supplier for that energy would be reduced to reflect those effects. The intent of the three-part LMP, at least in part, is to send a price signal to incentivize generators to locate where it is efficient to do so.

As noted by GINT witness Ms. Bodell:

...The point of these prices as calculated by ISO New England is to send a price signal. And the price signal, if it's lower, says don't build here because we don't need you as much, and if it's higher, it says we'd like you to build here, with respect to generation. And it can send the same type of signal with respect to load if you're passing through the price. So, the price signal that ISO New England calculates is meant to send the signal to create economic buildout where it's needed.

...

Generally, the highest prices occur at load centers. So, I would expect Boston would have among the highest because it's hard to get energy in there....

Hearing Tr. at 125-6 (Jan. 8, 2019).

Thus, if there were no barriers to locating new sources of supply anywhere in New England, nor any practical considerations such as proximity to fuel sources (such as natural gas pipelines or, in the case of hydropower, water sources) then presumably

¹³ Information relating to ISO-NE's Locational Marginal Pricing can be found at <https://www.iso-ne.com/participate/support/faq/lmp>

new power plants and other sources of supply would choose to locate at the nodes where LMPs are the highest and with the least negative congestion and loss effects. However, there are such barriers and practical factors that drive location decisions by generators. These considerations, together with the LMP price signal, influence where new plants will be sited. If a new supply source chooses to locate at a point that results, for example, in an increase to the loss component of the LMP, that does not by itself suggest the decision was not economically rational.

In this case, because the NECEC-enabled energy will be paid based on a contract price, rather than the LMP at Larrabee Road, the 83D RFP process and results may also bear on the economic rationality question. As discussed at the January 8, 2019 hearing, the NECEC was selected as part of competitive solicitation process in which more than 50 bids from 46 different bidders were received. Hearing Tr. at 129 (Jan. 8, 2019). The Commission presumes that the evaluation of the competing bids would have taken into account the relative economics of the various projects, including the energy value at the project's delivery node given that, at least with respect to the NECEC, is the energy market value the MA EDCs will realize. As noted above, although the LMP would be higher in load centers such as Boston, it would be difficult and expensive to actually site a new power plant in, or deliver energy to, those areas. Thus, in evaluating economic rationality, the analysis, either in the wholesale market or a competitive bid process, becomes one of tradeoffs among various factors. Finally, it should be noted that, from a consumer's point of view, lower zonal LMP's, *i.e.*, more negative loss and congestion components, translate directly into lower prices for customers located in that zone.

c. Price-Taking Resources

A supplier bidding energy into the ISO-NE market will generally bid a price that reflects its marginal cost of production. Resources such as the NECEC, which have delivery obligations and are paid pursuant to a pre-established contract, or resources like hydropower that have a low marginal cost of production, have the economic incentive to bid a low or zero price with ISO-NE to ensure they will be dispatched. This type of resource is described as "price taking" in that the resource will commit to, or "take," the market clearing price, whatever it turns out to be when actually dispatched. Price-taking resources lower the energy market clearing price by displacing energy from more expensive units.

The NECEC is likely to be a price-taking resource. As noted by LEI: "LEI also assumed that the shippers on NECEC would offer as price takers in the wholesale energy market in order to fulfill their contractual obligations to Massachusetts." LEI Report at 18. By offering NECEC energy as a price-taking resource, HQUS can ensure that the NECEC energy will be selected before higher-priced resources.

d. Analysis in the Record and Positions of the Parties

As noted above, analyses of the effect of the NECEC on wholesale energy prices in Maine and the region were provided by Daymark and LEI.¹⁴ Daymark's analysis, which was conducted using its AURORA production cost model, indicated that the import of energy at the full 1,200 MW capacity of the NECEC transmission line would reduce LMPs on average by \$3.70/MWh. CMP Exh. NECEC 5 at 11. Daymark concluded that these price reductions would save Maine electricity customers \$44 million per year relative to what customers would have paid but for the NECEC. *Id.* Daymark concluded, further, that the NECEC would provide a benefit of \$496 million NPV (2023\$) for Maine electricity customers over the first 20 years of the project. *Id.*

LEI's analysis of the energy market benefits of the NECEC, conducted for a 15-year period using LEI's proprietary production cost model POOLMod, also indicated savings for Maine electricity customers, albeit at a lower level than Daymark's. Specifically, LEI found that over the first 15 years of operation, the NECEC would yield wholesale energy cost reductions for Maine customers of about \$14 million per year, which equates to an aggregate benefit of \$122 million NPV (2023\$) over this period. LEI Report at 31-32.

CMP asserts that the NECEC will lower wholesale electricity supply prices in Maine, and that this is consistent with Maine's policy to encourage the reduction of electricity costs for Maine customers. CMP Initial Br. at 29. CMP cites to the analyses of energy market price impacts on the record, including the single-year analysis of GINT, as evidence that the NECEC will reduce wholesale and retail electricity prices in Maine and throughout New England. *Id.* at 30. According to CMP, the models taken together delineate a potential range of energy price suppression benefits from the NECEC, with LEI on the low end at \$13 million per year in retail energy price suppression benefits, GINT in the middle at \$26-\$36 million wholesale energy price suppression benefits for the year 2023, to Daymark on the high end at \$44 million per year in wholesale energy price suppression benefits. *Id.* at 35. CMP disputes the claims of GINT and NextEra that NECEC will create material congestion in the ISO-NE wholesale energy market. *Id.* at 36-38. CMP argues, further, that the NECEC will mitigate the impacts of sustained natural gas price increases by inducing an average annual reduction of 54.2 million MMBtu of natural gas and provide a hedge against temporary increases in natural gas prices. *Id.* at 39-40.

The IECG states that there is no dispute in this proceeding that increasing the available supply of zero-bid energy into the ISO-NE market would provide energy market price benefits to Maine electricity consumers. IECG Initial Br. at 20. The IECG notes that, as a generation resource with no incremental fuel cost, HQ's hydroelectric power will be able to bid into the ISO-NE energy markets a price of zero, allowing it to collect the locational marginal price for its output in all hours that it supplies energy. In every hour that this occurs, the market clearing price will be lowered as the most

¹⁴ GINT also conducted an analysis of energy market benefits of the NECEC using Calpine's UPLAN model. However, the analysis was conducted for only the first year of the NECEC operations.

expensive generation resource is replaced by a lower-cost generation resource as the unit that sets the market clearing price. The IECG notes, further, that because the market clearing price is paid to all successful bidders, regardless of the price that they themselves bid, this represents a price reduction for every kilowatt hour sold in such hours. *Id.* at 21.

The IBEW argues that the LEI estimates of energy and capacity market savings are based on extremely conservative assumptions, but provide additional corroboration of Daymark's conclusion that there are significant ratepayer savings that would be provided by the NECEC. IBEW urges the Commission to make such a finding. IBEW Br. at 3. The City of Lewiston argues that the NECEC will facilitate the transmission of up to 1,200 MW clean hydropower generation to the New England transmission grid for 40 years and help to lower electricity costs. Lewiston Initial Br. at 4. The Chamber notes that, although it supports the NECEC for a variety of reasons, the energy cost reduction benefits of the Project are particularly significant for Maine businesses that use a lot of electric energy and any prospective Maine business considering its energy costs. Chamber Initial Br. at 4. Acadia Center states the region will economically benefit from the NECEC through expected reductions in regional wholesale market prices. Acadia Center Initial Br. at 3. WM&RC also asserts that the NECEC will likely provide lower wholesale market prices. WM&RC Initial Br. at 11. Finally, the NRCM agrees that the NECEC will depress energy prices in Maine; however, NRCM asserts that the NECEC could increase congestion, making it more costly for Maine renewable generators to reach the market. NRCM Initial Br. at 17.

GINT argues there is no meaningful energy market price suppression benefit to ratepayers. GINT Initial Br. at 33. GINT bases this position on a number of different factors. First, natural gas price futures have decreased since the energy price impact analyses have been conducted. *Id.* at 34. Second, GINT asserts that, because there is no meaningful requirement for NECEC deliveries to be incremental, price suppression will be minimal. *Id.* at 35. GINT also argues that any energy market price reductions would be negated by increases to capacity market prices as generators submit higher capacity market bids in an effort to recover revenues needed to remain viable. *Id.* at 39. GINT asserts, further, that the NECEC will increase "wasteful" line losses and congestion to the detriment of Maine's existing and future generation base. *Id.* at 43. Finally, GINT argues that any energy market price suppression due to the NECEC could harm Maine generators, especially biomass and small hydropower plants. *Id.* at 59-60.

NextEra asserts any energy benefits from the NECEC are speculative and limited in time. NextEra Initial Br. at 19. According to NextEra, the flexibility of the contract delivery terms with the MA EDCs can affect when and how much energy flows over the NECEC, which in turn, impacts whether and how much of the claimed energy price suppression benefits will be realized. *Id.* at 21. Finally, because the analytical estimates of energy benefits extend to only the first 20 years of the contract, NextEra argues that any price suppression benefits from years 21-40 are only speculative. *Id.* at 24.

Caratunk argues that the NECEC will not do much if anything to lower costs for ratepayers. Caratunk Initial Br. at 4. Ms. Kelly cautions that there are no assurances that the NECEC will, in fact, lower costs for Maine ratepayers over the long term, and that the analyses conducted to estimate the benefits are based on assumptions. Kelly Initial Br. at 13.

e. Discussion

As noted above, HQUS has contractually committed to provide, and the MA EDCs have committed to purchase, 9.45 TWh of energy per year for 20 years to be delivered over the NECEC. Given the available capacity of the NECEC, this obligation will require energy to be delivered at a very high capacity factor. Stated another way, energy will have to be delivered in almost every hour of the year. To ensure that it meets its contractual obligations, HQUS can be expected to participate in the market as a price-taking resource, *i.e.*, submitting a low- or zero-price bid, and taking the clearing price in all hours. It is clear that the injection of such a large quantity of price-taking energy into the Maine Zone will have a materially beneficial effect on energy prices in Maine.

Although the magnitude of these benefits cannot be measured precisely, the LEI and Daymark analyses provide a credible range. As noted above, these analyses indicate wholesale market benefits of from \$14 million per year (LEI) to \$44 million per year (Daymark), with estimated NPV benefits ranging from \$122 to \$496 million (2023\$).

With respect to the congestion issues raised by GINT and NextEra, the Commission finds that the record does not support a finding that the NECEC will result in a material increase in congestion in Maine. The analyses of both Daymark and LEI indicate only small increases in the number of hours that either the Surowiec-South or Maine-New Hampshire interface would be congested. Daymark Report at 25; LEI Report at 25. In addition, the GINT modeling indicated no congestion at the Surowiec-South interface and only modest congestion at the Maine-New Hampshire interface. Hearing Tr. at 127 (Jan. 8, 2019); Daymark Reb. Test. at 19. NextEra, based on its initial modeling, asserted that the NECEC would result in significant congestion. However, NextEra subsequently acknowledged errors in its modeling that render their results unreliable. Hearing Tr. at 7-55 (Oct. 22, 2018). Finally, the Commission notes that, to the extent the NECEC did result in increased congestion and/or losses in Maine, this would result in lower wholesale energy prices in the Maine Zone.

Finally, for the reasons discussed in Section V(A)(5) below, the Commission finds that the energy benefits resulting from the NECEC will not be offset by other factors, such as early retirement of other Maine generators.

3. Capacity

a. Overview

The evidence in the record also indicates that the NECEC will likely result in a reduction to wholesale capacity prices in Maine and across the New England region. The wholesale capacity market benefits in Maine, as estimated by the Commission's expert, LEI, and CMP's expert Daymark, range from \$19 million to \$27 million per year in nominal dollars, and the estimated NPV benefits over the first 15 years of NECEC operations range from \$223 million to \$292 million (2023\$). LEI Report Figure 4. For the reasons discussed below, however, capacity market savings from the NECEC are less certain than those in the energy market.

As with the energy market, the capacity market benefits would accrue to Maine due to the substantial amount of capacity that could be delivered across the NECEC into Lewiston. Bringing such a large quantity of incremental capacity into the regional market will tend to lower prices, given the simple supply/demand balance in the region.

b. Description of Forward Capacity Market

The ISO-NE FCM is governed by ISO-NE Market Rule 1, Section 13.¹⁵ Pursuant to the ISO-NE Rule, FCM auctions (FCA) are conducted each year to acquire capacity 3 years in advance of when it is to be delivered. Resources eligible to participate in the FCM include in-region generating plants and demand resources, and imports from other regions. Resources are awarded CSOs when their offer price clears the auction. Resources may exit the market and relieve themselves of their CSO by submitting de-list bids in subsequent auctions. Only new or de-listing resources may set the auction clearing price. All other resources are considered "Existing Resources" and "take" the FCM clearing price. Pursuant to the market rules, the NECEC would participate in the FCM as an "Elective Transmission Upgrade" (ETU) backed by a "New Import Capacity Resource."

As is clear from the record in this proceeding, the FCM rules are complicated, and how they would apply to the NECEC has been extensively debated by the experts and the parties. The three elements of the FCM rules that have been most debated are (1) the Qualification, (2) the MOPR, and (3) the Competitive Auctions for Supported Policy Resources (CASPR). Each of these is discussed in more detail below.

c. Qualification

Before participating in an FCA, a resource must go through a Qualification process administered by ISO-NE. With respect to the NECEC, which as noted above is both an Import and an ETU, Section 13.1.3 of the ISO market rules governs the Qualification process. First, the rules require that an ETU must be built to a higher interconnection standard than non-ETU resources. This higher standard, which is referred to as the Capacity Capability Interconnection Standard, or CCIS, is intended to ensure that capacity from an ETU can be delivered into the relevant zone without

¹⁵ Information relating to ISO-NE's FCM can be found at <https://www.iso-ne.com/participate/rules-procedures/tariff/market-rule-1>.

relying on the system delivery capability being used by other resources in the zone that already have a CSO.¹⁶ Second, with respect to a New Capacity Import, the resource must demonstrate the reliability of the generation source behind the import to qualify. This can be done by providing contracts for capacity for one or more years, demonstrating proof of ownership over one or more External Resources to back the Import, or ensuring that the capacity it supplies to the New England Control Area will not be recalled or curtailed to satisfy the load of the external Control Area, or that the external Control Area in which it is located will afford New England Control Area load the same curtailment priority that it affords its own Control Area native load.¹⁷

d. The Minimum Offer Price Rule (MOPR)

The ISO-NE Internal Market Monitor (IMM) oversees the FCAs to ensure they are conducted in a fair and competitive manner. Pursuant to the rules for new entrants, all offers of capacity that are below the Offer Review Trigger Price (ORTP) are subject to review by the IMM for consistency with the facilities' costs. This is known as the "MOPR."¹⁸ The objectives of MOPR are to prevent the exercise of buyer-side market power and resulting capacity price suppression and to ensure that new resources are offered into FCM on a competitive basis. EXM Exh. 3 at 1.

The ORTP reflects the IMM's calculation of what a given capacity resource should require for compensation from the capacity market. Prior to each FCA, the IMM publishes the ORTP for all resources. Market Rule 1, Appendix A, Section III.A.21.1.1. Pursuant to the MOPR, any offer of capacity from a new facility that is below the applicable ORTP is subject to review by the IMM for consistency with the facility's costs. As part of this review process, a facility can provide information to the IMM that

¹⁶ On this point, CMP states:

This interconnection standard is more stringent than the Minimum Interconnection Standard (MIS) that is typically used for Section I.3.9 Approval. Unlike the MIS, which allows other generation to be dispatched off to permit the interconnection of the proposed new resources, the more stressful overlapping impact analysis that is performed pursuant to the terms of the ISO-NE Planning Procedure No. 10 to satisfy the CCIS, requires that new generation be fully deliverable to a Load Zone (in this case Maine), without dispatching off existing generation within the same zone of interconnection.

CMP Petition at 43. See *also* Section 1 of Schedule 25 of the ISO Open Access Transmission Tariff.

¹⁷ Thus, should an emergency situation require the shedding of load to preserve overall system reliability, the external control area would not preserve operations in its own control area by shedding load in the receiving control area first.

¹⁸ MOPR is not a defined term in the ISO tariff. It is the IMM administration of the Offer Floor Price and Offer Review Trigger Price collectively that is referred to as the "MOPR."

demonstrates that its offer is reasonable. Based on this review process, the IMM may establish an alternative “Offer Floor Price” which is the value below which the facility may not bid.¹⁹ If the MOPR set by the IMM for a given facility is higher than the FCA clearing price, the facility would be prevented from clearing in the auction.

e. Competitive Auctions with Sponsored Policy Resources (CASPR)

In 2018, ISO-NE adopted rules related to CASPR to address the concerns about the participation of subsidized resources in the FCM. CMP Exh. NECEC 48 at 1. CASPR allows state-sponsored resources which otherwise do not clear the primary auction due to the MOPR to acquire a CSO by “trading” with an existing generator.²⁰ Immediately following an FCA primary auction, there is a second “substitution auction” in which the subsidized resource has an opportunity to buy out the position(s) of a resource (or resources) that was (were) awarded a CSO in the primary FCA. Once the CASPR resource acquires the existing generator’s CSO, the existing generator must then permanently retire from the capacity market. The subsidized resource then holds a CSO and receives capacity revenues as an existing resource for subsequent capacity auction periods, but the total amount of capacity on the system is unchanged, and prices remain competitive. Fowler Dir. Test. at 9. Additionally, as LEI testified, once a CASPR resource acquires a CSO in the substitution auction, it does not have any MOPR constraints in future primary auctions. Tech. Conf. Tr. at 54 (Dec. 19, 2018).

Finally, as is the case with the energy market, prices in the FCM can vary by zone. While not as granular as LMPs in the energy market, there are also locational pricing incentives built into the capacity market. Market Rule 1 Section III.12. When constraints occur in Import Constrained Zones, the capacity clearing price in the constrained zone will be higher relative to clearing prices in the rest of the pool. When constraints occur in Export Constrained Zones, prices in the constrained zone will be lower relative to the prices in the rest of the pool.

f. Analyses in the Record and Positions of the Parties

Four expert witnesses provided analyses of the NECEC with respect to the capacity market benefits and the issues discussed above. Daymark provided estimated capacity market benefits for Maine and the region. LEI provided an analysis of the potential capacity market benefits from the NECEC, and also provided expert testimony and analysis on the likelihood that the NECEC-enabled capacity would clear the auction. Finally, witnesses for GINT and NextEra provided testimony and analysis regarding the likelihood of NECEC-enabled capacity being able to qualify and meet the MOPR.

¹⁹ The terms “Offer Floor Price” and “MOPR” are sometimes used interchangeably.

²⁰ The capacity offers of these subsidized resources do not affect FCA clearing prices.

Daymark assumed that 1,090 MW of capacity from the NECEC would qualify in, and clear, the FCM. Daymark's estimated capacity market price reductions for Maine averaged \$50 million per year during the first 8 years of the Project, yielding a \$312 million NPV over the life of the Project. Daymark Report at 13-14. Daymark did not provide any analysis on the MOPR issue.

LEI provided multiple capacity market analyses. In its initial Report, LEI provided its estimate of the capacity market benefits from the NECEC, assuming that 1,090 MW cleared. LEI estimated that this would result in savings for Maine of \$19 million per year, and \$223 million NPV over the 15-year LEI study period. LEI Report, Figure 4. Subsequently, in a memo dated September 10, 2018, LEI provided support for its conclusions about the NECEC MOPR price, and the likelihood that, given this MOPR price, the NECEC capacity would clear the capacity market. LEI MOPR Memo. LEI also recalculated the MOPR price and estimated capacity market benefits that would result for the entire New England region if HQUS were to qualify a lower amount of capacity. LEI Supplemental MOPR Memo at 4-6. LEI's analysis of the benefits to the market region-wide indicated savings of between \$2 and \$3 billion NPV (2023\$). *Id.* at 5-6. This equates to approximately between \$155 and \$243 million (2023\$) in benefits to Maine. CMP Initial Br. at 48, fn. 143. Finally, LEI highlighted a number of different ways HQUS might choose to offer different levels of capacity into the market based on an assessment of all options and economic opportunities. *Id.* at 5.

GINT experts testified that there would be no capacity market price suppression benefits because the NECEC would fail the MOPR. Fowler Sur. Test. at 13. Mr. Fowler's testimony regarding how the IMM would interpret the provisions for setting the Offer Floor Price indicated that NECEC MOPR prices would exceed future auction clearing prices. Corrected Fowler Sur. Test. at 4.

NextEra witness Robert Stoddard testified that the NECEC is unlikely to have a measurable change on capacity prices in New England because HQ does not have surplus winter capacity and because the Project cost is likely to exceed the relevant clearing price in the FCA. Stoddard Sur. Test. at 4. Dr. Stoddard's MOPR analysis indicated that the NECEC's minimum offer price would not clear the market, "this capacity is far too expensive to clear in the primary auction of the FCA in the foreseeable future." *Id.* at 14.

CMP argues that NECEC's participation in the FCM is likely to reduce capacity prices for customers in Maine and New England. CMP Initial Br. at 44. CMP notes that there is substantial evidence in the record that demonstrates HQ Production will have capacity to offer via the NECEC. *Id.* at 46. CMP argues that LEI's MOPR Memo, which establishes that the NECEC-enabled capacity will clear in the primary auction, is reasonable and should be adopted by the Commission. *Id.* at 50. CMP notes that LEI's method of calculating the relevant transmission costs more accurately reflects the true costs of the capacity resource because HQ TransEnergie, not HQ Production, will be responsible for paying the construction costs of the line on the Canadian side, and HQ TransEnergie's transmission rate for firm point-to-point transmission service is designed

to capture the marginal cost of new transmission construction in Québec. *Id.* at 53. With respect to energy costs, CMP agrees with LEI's and NextEra's use of an energy opportunity cost approach, and disagrees with GINT's claim that the energy cost factor must be calculated using the total cost of new energy generation capacity required to serve the NECEC. *Id.* at 54-55. CMP notes that the energy opportunity cost approach is the appropriate methodology to reflect the energy costs associated with the NECEC capacity resource because it is the most accurate representation of the true costs of the resource, particularly in light of market conditions, which indicate that HQ Production is not building new generation for the NECEC; but in the absence of the NECEC, HQ Production would sell its energy to other markets. *Id.* at 56. Even if the NECEC-enabled capacity does not clear in the primary auction, and acquires a CSO through the substitution auction, CMP asserts that customers in Maine and in the ISO-NE region will still benefit. *Id.* at 65.

IECG argues that the LEI estimate of the value of capacity market benefits is reliable and should be used by the Commission as a basis for estimating benefits to Maine energy consumers. IECG Initial Br. at 28. However, according to the IECG, given the uncertainty related to the MOPR issue, it may be prudent to discount the LEI estimate by 50% to reflect this uncertainty. IECG therefore recommends that the Commission adopt a value of \$110 million in benefits to Maine energy consumers related to capacity market savings. *Id.*

WM&RC asserts that the NECEC will likely provide capacity benefits. WM&RC Initial Br. at 13-14. WM&RC argues: "LEI's ultimate conclusion was that, based on a range of conditions and likely MOPR estimates, the NECEC should not be constrained from clearing in the primary auction." *Id.* at 14. WM&RC notes further that even if the NECEC does not clear the primary auction, ratepayers would not be adversely impacted and the Project would still yield net benefits to Maine's consumers. *Id.*

IBEW argues that that the LEI estimates of energy and capacity market savings are based on extremely conservative estimates, but corroborate Daymark's conclusion that there are significant ratepayer savings that would be provided by the NECEC. IBEW Initial Br. at 6.

GINT argues there is no capacity market price suppression benefit to ratepayers. GINT Initial Br. at 9. GINT notes that there is no evidence that Hydro-Québec has excess incremental generating capacity beyond what it is already offering into the New England market. *Id.* at 10. GINT notes that Hydro-Québec and CMP have stated that Hydro-Québec would not need to construct any new dams or other generating capacity in order to provide energy under the Massachusetts contracts. *Id.* at 11-12. Moreover, according to GINT, the North American Reliability Corporation has projected a significant shortfall in Hydro-Québec capacity levels by 2024. *Id.* at 13. GINT also asserts that, the Hydro-Québec Minimum Offer Price would not clear in the FCA and that LEI calculation of the NECEC MOPR is unreasonable. *Id.* at 19. GINT asserts that the appropriate calculation should rely on the capital cost to build new generating capacity, and the capital cost to build new transmission on both sides of the border

and, that, if calculated this way, any capacity that could be offered through the NECEC would cost more than the market clearing price. *Id.* at 22.

NextEra agrees with GINT that the NECEC will produce no capacity benefits. NextEra asserts that HQUS will be unlikely to qualify in the capacity market unless the load in Québec can be curtailed on the same basis as the HQUS deliveries into New England, and argues that CMP failed to submit substantial evidence demonstrating this to be the case. NextEra Initial Br. at 20. NextEra also asserts that the Offer Floor Price for the NECEC would prevent it from clearing the auctions. Finally, NextEra argues there has been no showing of a seller of capacity over the NECEC for years 21–40 of the Project. *Id.*

NRCM agrees with GINT and NextEra that the NECEC will provide no capacity benefit because it is unlikely to satisfy the MOPR due to the significant out-of-market revenues it will receive by virtue of its selection in the MA 83D solicitation process. Instead, it is more likely that the NECEC would have to obtain a Capacity Supply Obligation through the new CASPR substitution auction, which would require the permanent retirement of an equal number of MWs of existing generation in Maine for the number of MWs the NECEC wished to clear in the FCA, noting that such retirements would result in some loss of jobs and tax revenues in the state. NRCM Initial Br. at 16. NRCM notes that, in evaluating bids into the MA RFP process, the MA EDCs did not calculate capacity benefits for different projects because of the difficulty in forecasting capacity market prices and because the new FCM rules, such as CASPR, were likely to make it more difficult for state-sponsored resources, such as the NECEC, to impact capacity clearing prices. NRCM argues that the Commission should follow suit and ascribe zero benefits to potential capacity price suppression effects. *Id.* at 16-17.

g. Discussion

The Commission finds that the NECEC will result in capacity market benefits to Maine. As noted above, the NECEC must satisfy the CCIS standard of the ISO-NE Open Access Transmission Tariff (OATT), which will ensure that NECEC-enabled capacity can participate in the FCM. In addition, the energy product that will be provided by HQUS, which is firm delivery of 1,090 MW of energy per hour in virtually all hours, is very much like a capacity product and is likely to require capacity to ensure that these firm energy delivery obligations will be met. Furthermore, the Commission notes that HQP has recently added new capacity to its system (Romaine 3), and is planning to add additional capacity over the next several years, suggesting that it will have incremental capacity for sale over the NECEC into the ISO-NE FCM. CLF Exh. 14 at 17.

With respect to the MOPR issue, the Commission finds the analysis and testimony of LEI to be the most internally consistent and credible and, thus, the Commission concludes that NECEC-enabled capacity is likely to clear in the primary auction. Given these factors, HQUS would have the ability to participate in the FCA

and, given the substantial revenue it would receive, would have a strong financial incentive to do so.

However, the Commission also recognizes the uncertainty regarding the capacity market benefits. As noted above, the record reflects benefits for Maine that range from \$19 million to \$27 million per year. Moreover, given the fluctuating nature of the ISO-NE capacity market and related rules, any such benefits, even if certain in the near term, cannot be certain over the longer term. Thus, the Commission concludes that the lower end of the range of benefits, \$19 million per year, for the first 10 years of NECEC operation, is a reasonable and conservative estimate of the capacity market benefits to Maine from the NECEC.

4. Reliability

a. Reliability Elements and Positions of the Parties

There are two distinct elements related to reliability that have been raised in this proceeding. The first is the degree to which transmission system reliability may be affected by the NECEC HVDC facility and the associated AC system upgrades required to accommodate it. The second is the degree to which the NECEC affects regional “fuel security.”²¹

CMP and NextEra have both conducted transmission system studies for the NECEC. CMP provided two studies: The “New England Clean Energy Connect (NECEC) Project Analysis and Technical Report,” and the “New England Clean Energy Connect Surowiec-South Interface Limits and Overlapping Impacts Study.” CMP Exh. NECEC 3. The Project Analysis and Technical Report was conducted pursuant to the ISO-NE I.3.9 process. The I.3.9 process ensures that any changes to the system, such as generator additions, do not have an adverse impact on the system. The Overlapping Impacts Study examines the NECEC to ensure that, along with identified upgrades, it would meet the CCIS. These studies identify the system upgrades needed for the NECEC. CMP Exh. NECEC 3; CMP Petition at 40-42.

NextEra also conducted transmission system modeling. Based on its assumptions that the NECEC would cause Maine-based generators to retire, NextEra witnesses conducted a study of the resulting reliability issues from such retirements. The NextEra study results, which were provided in the surrebuttal testimony of Mr. Whitley, indicated a potential need for future reliability upgrades given those assumptions. Whitley, Mayers, Wang Sur. Test. at 11.

In its brief, CMP highlights transmission reliability benefits that it asserts the NECEC will provide. First, CMP argues that the NECEC will add important redundancy between the Québec and New England systems, which will better protect the region in

²¹ “Fuel security” is a term that is frequently being used within ISO-NE. By its use of the term, the Commission is referring to the reliability, adequacy, and diversity of the fuel types behind supply resources serving the region.

the event of the loss of the existing Phase II intertie, one of the largest possible losses of supply in New England. CMP Initial Br. at 94. The additional interconnection between New England and Québec would also allow both control areas to provide incremental emergency support in the event of capacity deficiencies (tie benefits). *Id.* at 95. According to CMP, the AC upgrades required by the NECEC will increase the transfer limits at the Surowiec-South interface from 1,600 MW to 2,600 MW. CMP further states that the new 345 kV line between the Coopers Mills Road substation and the Maine Yankee substation (Section 3027) and the rebuilding of the 115 kV lines (Sections 62 and 64) out of Larrabee Road will add redundancy and additional transmission capacity to the transmission system across central Maine. *Id.* Finally, CMP argues that the additional transformer at Raven Farm will improve reliability in the greater Portland area. *Id.* at 95-96. CMP also states that the NECEC will provide significant fuel security benefits by delivering clean baseload hydropower to replace retiring resources in the region and by reducing the region's dependence on natural gas fired generation. *Id.* at 83.

The IECG argues that the additional capacity and fuel diversity provided by the NECEC will help to address a portion of the energy price spikes and reliability risk posed to Maine and New England by the lack of adequate natural gas pipeline infrastructure. IECG Initial Br. at 29.

GINT argues that the NECEC would make electric service in Maine less reliable by hastening the retirement, or preventing the development, of reliable generators under dispatch control here in New England and replacing them with less reliable power from Québec. GINT Initial Br. at 1. GINT asserts that the NECEC would provide no reliability if it does not deliver incremental energy. *Id.* at 63. GINT notes, further, that because New England and Québec experience winter weather at the same time and because Québec is a winter peaking system, relying on energy from HQ in the winter may have risks. *Id.* at 64. Finally, GINT argues that NECEC could reduce the reliability of the ISO-NE system by inducing the retirement of a potentially fuel-diverse resource through the CASPR program. *Id.* at 68.

NextEra does not refute the transmission modeling conducted by CMP and its consultants. NextEra Initial Br. at 25-26. However, NextEra argues that CMP has failed to show that the NECEC will not have a negative impact on reliability in future years because it did not present any probabilistic transmission studies regarding this issue. Without such studies, claims NextEra, it is not reasonable for CMP to claim there will be no reliability upgrades resulting from the operation of the NECEC. *Id.*

NRCM argues that attention devoted by CMP to the NECEC could strain CMP resources and result in less reliability and diminished ratepayer experience. NRCM Initial Br. at 20. NRCM also notes that, if the NECEC were to substitute for one or more of these (Maine) generators through CASPR, in-state resources with stored fuel would be traded for a long transmission line to Québec which would not help regional fuel security. *Id.* at 21.

b. Discussion

The Commission finds that the NECEC and associated upgrades will increase the reliability of the Maine transmission system. As noted above, because of the requirement that the Project meet the CCIS, the overlapping impact test requires that the NECEC must not erode the capacity deliverability of other resources in the Maine Zone. Because the overlapping impact test requires all of the generators with a CSO in the same zone to be “turned on” at their full output before the impact of the NECEC is modeled, any system upgrades necessary to ensure that the NECEC, as well as all of the other resources with CSOs in Maine, can operate at full output without being curtailed are the responsibility of the NECEC. Because, in reality, the system rarely operates this way, the system upgrades required by (and provided by) the NECEC will provide extra redundancy and reliability to the Maine system during normal operations modes.

The Commission finds that NextEra’s assertions about the potential adverse impacts of the NECEC 5-10 years in the future is not persuasive. As noted above, NextEra’s position reflects its assumed retirement of one or more Maine generators, the retirement of which is not indicated by the modeling done by LEI or Daymark. Moreover, the Commission notes that the NextEra witnesses admitted that NECEC system upgrades would resolve the N-1 reliability problems their study revealed. Hearing Tr. at 71-74 (Oct. 22, 2018).

The Commission notes, further, that seven Maine generation facilities totaling 1,370 MW in capacity, including those cited by GINT and NextEra as “at risk” due to the NECEC, had already submitted de-list bids in FCA 13 that were accepted by the ISO-NE.²² Had the de-listing of any of these facilities created the type of reliability problem that is here asserted by NextEra, these de-list bids would never have been accepted by the ISO-NE.

With respect to “fuel security,” the Commission concludes that the addition of this interconnection to Québec, and the substantial amounts of baseload hydroelectric energy it will enable, will enhance supply reliability and supply diversity in Maine and the region. The Commission notes that there are significant challenges to siting new energy infrastructure in the region, as is evidenced by local opposition to natural gas pipeline and electric transmission projects. At the same time, natural gas supplies from remaining gas fields offshore of Nova Scotia have diminished, and most of the supply from that region is expected to be gone by 2020. CMP Exh. NECEC 45 at 23. The Commission notes, further, that in response to fuel security concerns stemming from the potential loss of existing generators in the region, such as the Mystic Units 8 and 9 in Massachusetts, the ISO-NE is taking steps to prevent their retirement through

²² See Forward Capacity Obligations spreadsheet for FCA 13 which can be found at <https://www.iso-ne.com/markets-operations/markets/forward-capacity-market/>.

mechanisms such as cost-of-service Reliability Must Run contracts with ISO-NE. CMP Exh. NECEC 40 at 5.

With respect to fuel diversity, the region's dependence on natural gas presents serious challenges and risks, such as exposure to price spikes and concerns about supply adequacy in the winter periods. In an effort to address these concerns, ISO-NE has adopted various market rule changes over the past few years, such as Pay for Performance and the Winter Reliability Program. Excerpts from ISO-NE filings and presentations on these matters are provided below.

From the ISO January 17, 2014 filing for PfP - ER14-1050-000 MR1 Performance Incentives Changes

Indeed, as fully detailed in the testimony of Peter Brandien, the ISO's Vice President of Operations, the ISO has observed and documented pervasive and worsening performance problems among the existing generation fleet in New England. These problems, which are not limited to a single resource or fuel type, fall into three general categories. First, the region's growing dependence on natural gas leaves it extremely vulnerable to interruptions in gas supply, which can occur with little notice and which can affect multiple generators simultaneously. Second, a significant portion of New England's oil and coal units cannot provide reliable backup when gas problems arise due to increased outage rates, start-up problems, and other operational difficulties. Third, across the entire fleet, the ISO is observing increasing outage rates, poor responses to contingencies, and a host of other issues, such as failure to maintain liquid oil inventory, mothballing dual fuel capability, and inadequate staffing.

From the June 28, 2013 filing for the Winter 2013-2014 Reliability Program - ER13-1851-000

In the last few years, the ISO and stakeholders have identified a number of strategic risks. Two of these risks – related to New England's increased reliance on natural gas-fueled generation and to resource performance during periods of stressed system conditions – are most pressing, and the region is working on a number of solutions to address these concerns. For example, the ISO has implemented a change in Day-Ahead Energy Market timing and is making filings to improve offer flexibility and amend the reserve market. In addition, review of two sets of ISO-proposed revisions to the Forward Capacity Market ("FCM") rules is or will be underway with stakeholders. These proposed revisions aim to tighten the shortage event trigger and to redesign market incentives and, at the conclusion of the stakeholder processes, will likely be filed with the Commission later this year. The ISO intends that the proposed changes to FCM to redesign market incentives will directly address the gas dependence and resource performance issues discussed herein. This FCM performance incentive proposal is planned for implementation for the 2018-2019 Capacity Commitment Period. As a transition between the Winter Reliability Project and the FCM performance incentives project, the ISO intends to propose a scaled-down version of the

performance incentives project to purchase a fuel-neutral, winter-based reliability product for the winters of 2014-15 through 2017-18.

From the ISO March 6, 2018 Markets Committee meeting presentation on "Winter Energy Security Improvements: Market Based Approaches."

In accordance with FERC's July 2, 2018 order in EL18-182-000, the ISO must develop and file improvements to its market design to better address regional fuel security.

Finally, as noted above, fuel security has been a growing issue in the ISO-NE region such that it has become a subset of system reliability as viewed by ISO-NE and the FERC. The Commission points to the Operational Fuel Security Analysis provided by ISO-NE in January 2018. This analysis was later adopted by FERC in its fuel security order. *Order Denying Waiver Request*, FERC Dockets ER18-1509-000, EL18-182-000 (July 2, 2018). The study conclusions state: "The study indicates that over the next several decades, New England's power system will largely depend on the availability of two key elements, sufficient injections of LNG and electricity imports from neighboring regions." The Commission recognizes that there may be challenges associated with depending on imports, but given the difficulty that the region faces in terms of siting any energy infrastructure, the ISO NE's conclusions regarding the future are compelling. Thus, in this case, the Commission is presented with a transmission line that will provide a pathway to import up to 1,200 MW at no cost to Maine and will provide significant mitigation for the issues identified in Operational Fuel Security Analysis. Because fuel security, through FERC jurisdiction and its ruling on the Mystic Units, has been determined to be a regional issue and, thus, the costs to address it are socialized across the region, if a significant import line is not built now, it will likely be built later, the costs for which are likely to be treated in a way that is much less favorable to Maine than the NECEC.

5. Effect of the NECEC on New and Existing Generators in Maine

a. Overview

There have been three questions raised in this proceeding related to potential adverse effects on new and existing generators in Maine resulting from the NECEC. First, whether the NECEC would result in reductions to energy prices in Maine which, in turn, would reduce revenues for in-state generators. Second, whether, by its participation in the CASPR, the NECEC would cause existing Maine generators to retire. Third, with respect to new generators, whether the NECEC would "use up" the existing transfer capacity "headroom" at the Surowiec-South interface, thereby rendering that transfer capacity unavailable to new generators seeking to locate in Maine.

b. Positions of the Parties

GINT and NextEra argue that the NECEC, because of its effect on wholesale energy prices in Maine, will cause in-state generating plants to be more likely to retire.²³ In addition, GINT and NRCM note that because it is likely that NECEC would have to obtain a CSO through the new CASPR substitution auction, the NECEC would result in permanent retirement of an equal number of MWs of existing generation in Maine for the number of MWs the NECEC wished to clear in the auction. These parties note that such retirements would result in a loss of jobs and tax revenues in the State. GINT Initial Br. at 53; NRCM Initial Br. at 16.

On these points, CMP notes that the analyses of both LEI and Daymark do not indicate that the NECEC will result in any early retirement of Maine generators. CMP Initial Br. at 131-132. CMP notes that these results make sense, given the low capacity factors of the units. *Id* at 132. In addition, CMP cites to evidence in the record that certain Maine generators, most notably the Wyman units, are already at risk of retirement for reasons entirely unrelated to the NECEC, including their location, age, and the significant financial risks they face under ISO-NE's new Pay for Performance rules.²⁴ *Id* at 134.

The IECG agrees with CMP in regard to the tenuous position of the Maine generators today, due to their poor capacity factors and low revenues. IECG Initial Br. at 32. IECG observes, further, that, with respect to property tax revenues, the facilities most at risk contribute only \$5.5 million per year, which is substantially less than the estimated property tax revenues of \$18.4 million from the NECEC. *Id*.

In addition, several parties have raised concerns related to potential new generators in Maine. RENEW argues that, if NECEC capacity were to absorb existing transfer capacity "headroom," the Commission should condition any approval on (1) CMP increasing the Surowiec-South interface by the full 1,000 MW as planned regardless of whether ISO-NE finds a lower amount would be satisfactory, and (2) requiring that HQ seek qualification of a lower amount of capacity. RENEW Initial Br. at 5. On this point, GINT argues that the NECEC would "fill the headroom at Surowiec-South, increasing the expense of transmission development for Maine renewables." GINT Initial Br. at 60.

Acadia Center, CLF, and NRCM share these concerns, noting that the NECEC could hinder the development of new Maine-based renewable resources by consuming spare transmission system transfer capability. Acadia Center Initial Br. at 4; CLF Initial Br. at 6; NRCM Initial Br. at 19.

²³ GINT witness Bodell asserted the NECEC's participation in ISO-NE energy markets would hasten Maine generating plant retirements, eliminating jobs and property tax base. Bodell Dir. Test. at 40. However, no quantitative analysis or modeling to support these claims was provided.

²⁴ As noted in Section V(A), many of these generators submitted de-list bids in FCA 13.

CMP argues that, on the contrary, the NECEC will not prevent the development of renewable energy in Maine. CMP notes that the NECEC will have no effect on any of the proposed 765.5 MW of renewable generation that are ahead of it in the ISO-NE interconnection queue. CMP Reply Br. at 47-48. With respect to other renewable generation projects, CMP argues that the NECEC-related transmission system upgrades will actually benefit new renewable projects by increasing the transfer capability at the Surowiec-South interface and defraying system upgrades and costs that would otherwise be required of these projects by ISO-NE in order to interconnect. *Id* at 51-53.

IECG argues that the decision regarding the NECEC should not involve consideration of negative effects on generators, new or existing, in Maine's restructured market. IECG Initial Br. at 8. IECG argues that generators are not entitled to, and should not receive, protection from the entry of new entrants in a competitive market. *Id* at 10. According to the IECG, the Commission's decision whether to grant a CPCN must be based on considerations relating to electric consumers, not generators. *Id* at 8.

c. Discussion

Based on the record in this proceeding, the Commission does not find that the NECEC will result in the adverse effects on Maine generators as alleged by GINT and NextEra. With respect to the effects the NECEC will have on energy market prices, the Commission finds that, because of the already low capacity factors and energy revenues of these facilities, reductions in energy market prices are unlikely to be material for them. The Commission notes, further, that other factors, including the ISO-NE Pay for Performance rules, create far greater risks for these generators than the NECEC. It may be, at least in part, that because of these risks, most GINT and NextEra generators submitted de-list bids in FCA 13.²⁵ Moreover, the Commission agrees with the IECG that, as a policy matter, it is the interests of customers, not generation competitors, that must be the priority consideration in deciding whether or not to grant a CPCN for the NECEC.

The Commission also finds little merit to the concerns regarding the extent to which the NECEC may frustrate Maine-based renewables development by absorbing "headroom" on the transmission system. First, as noted above, there is more than 750 MW of new, renewable capacity in Maine ahead of the NECEC in ISO-NE's interconnection queue. Second, as also noted above, the Surowiec-South interface must be upgraded to accommodate 1,200 MW of capacity in order for the NECEC to meet the CCIS. If, as some parties argue, the level of NECEC-enabled capacity will be less than 1,200 MW, the available headroom at the interface may be substantially greater than the 200 MW that currently exists. Moreover, for the reasons expressed by CMP and the IECG, the Commission finds that "preserving" headroom for potential future competing projects at the expense of a project in development is poor public

²⁵ See Forward Capacity Auction Capacity Obligations FCA 13: <https://www.iso-ne.com/markets-operations/markets/forward-capacity-market/>

policy, as well as being wholly inconsistent with the ISO-NE interconnection rules and processes.

B. In-State Economic Impacts²⁶

1. Economic Impact Studies

In its Petition, CMP presented a study conducted by Ryan Wallace, Director of the Maine Center for Business and Economic Research (MCBER) of the University of Southern Maine (USM) that assessed the macroeconomic effects of the NECEC in Maine and New England using economic models developed by the Regional Economic Models Inc. (REMI). (USM Study). The USM Study grouped the effects into three broad areas or time periods: development/construction related; post-construction, or operations, phase; and market price reduction related. The USM Study indicates that NECEC transmission infrastructure investments are expected to support a \$573 million (2009\$) addition to Maine GDP and over \$440 million (2009\$) in total worker compensation during the 6-year development and construction period (2017-2022). CMP Initial Br. at 70. In addition, the USM Study indicates that the NECEC would support over 1,740 direct, indirect, and induced jobs per year in Maine during that same period. *Id.* According to Mr. Wallace, these construction-period benefits would be realized throughout the State. *Id.* at 71. During the NECEC post-construction, or operations, period, the USM Study indicates that the NECEC would support a total of 37 jobs, 21 of which would be to maintain and operate the NECEC and the remaining 16 from indirect and induced spending. *Id.* at 72. Finally, the Study indicates that the NECEC's energy market price suppression effects will result in over 260 jobs in Maine, on average, and more than \$23 million in GDP and \$17 million in total compensation each year over the 20-year term of the PPAs. *Id.* at 73.

The LEI Study included a review of the USM Study and an independent analysis of the macroeconomic benefits resulting from the NECEC. In conducting its analysis, LEI used the same REMI PI+ software as USM. LEI Report at 32. As was done in the USM Study, LEI analyzed the macroeconomic effects during (1) the development/construction period and (2) the operations period. LEI's analysis reflected its projected energy market prices (rather than Daymark's), and included certain factors that were omitted in the USM analysis, most notably, NECEC capacity market price impacts, contract costs borne by Massachusetts ratepayers, and early retirement and deferred investment in generation capacity triggered by the NECEC. *Id.* at 54. LEI also provided its independent analysis of tax revenue from the NECEC by municipality. *Id.* at 37.

²⁶ For the reasons discussed in Section IV(A) above, the Commission's focus is on benefits to Maine rather than to the New England region as a whole.

A comparison of the LEI and USM macroeconomic benefits is shown in Figure V.1 below.²⁷

Figure V.1

Figure 5. Comparison of LEI's analysis and USM's analysis				
Benefit categories	LEI Analysis		USM Analysis	
	Maine	New England	Maine	New England
Jobs - development and construction period (Annual average for 2017-2022)				
Direct	856	N/A	868	N/A
Indirect and Induced	775	N/A	824	N/A
Total	1,631	N/A	1,691	N/A
Jobs - operations period (Annual average for 2023-2037)				
Total	291	1,826	329	3,735
GDP - development and construction period (Annual average for 2017-2022), fixed 2009\$ million				
	\$98.2	N/A	\$94.1	N/A
GDP - operations period (Annual average for 2023-2037), fixed 2009\$ million				
	\$29.1	\$205.3	\$25.8	\$406.2

Note:

1. Economic impacts in terms of incremental jobs and GDP presented in the table are the annual average of the modeling periods in LEI's study, namely 2017-2022 for the construction period and 2023-2037 for the operations period.
2. The incremental jobs and GDP in New England do not include those created by O&M activities of the NECEC project (indicated in the table as "N/A"), since the macroeconomic impacts of O&M spending is modeled within Maine, to be consistent with USM's approach.

LEI Report at 15.

As shown in Figure V.1, LEI's analysis reflects employment and GDP benefits in Maine that are generally consistent with those reflected in the USM Study. With respect to the broader New England region, LEI's analysis reflects benefits that are significantly less than those in the USM Study due to LEI's inclusion of the contract costs borne by ratepayers in Massachusetts, as well as early retirement of generators in Connecticut. *Id.* at 16.

Both LEI and the USM Study estimate approximately \$18 million annual incremental municipal tax revenue received from the NECEC based on the Project's taxable value and the municipal mill rates in effect in 2016. LEI Report at 64; USM Study, Section 6. As noted by LEI, the actual tax payments from the Project will depend

²⁷ CMP provided an update to the information in its Petition in which it estimated the number of direct, indirect and induced jobs would be 1,742 on an annual average basis based on updated projected NECEC costs. ODR-003-011, Highly Confidential Attachment 2.

on a number of factors, including the taxable valuation in each municipality, the budget plan and mill rates in each municipality, and the change in valuation of other properties. LEI Report at 64-65. Additionally, tax payments from the NECEC are expected to decline as the taxable value of the project depreciates. *Id.* at 65.

2. Positions of the Parties

CMP describes the USM Study as “conservative” in that it does not reflect any potential NECEC capacity market price suppression effects, nor any benefits from increased property and sales taxes. CMP Initial Br. at 73. CMP notes that LEI’s analysis confirms that the NECEC will produce substantial jobs and increased GDP during its development/construction and operations periods, and that LEI generally confirms the macroeconomic benefits to Maine shown in the USM Study. *Id.*

GINT argues that the USM Study overstates macroeconomic benefits and is unreliable. GINT Initial Br. at 61. GINT points to the following flaws of the USM Study to support its assertion: (1) reliance on Daymark’s energy price forecast; (2) failure to include the contract costs borne by Massachusetts ratepayers; (3) failure to include the effect of early retirement of or deferred investment in generation in Maine;²⁸ and (4) the adverse effect on the tourism industry in Maine. *Id.* at 62-63. Other parties, including the NRCM and Caratunk, also dispute the macroeconomic benefits as estimated by the USM and LEI Studies, for reasons such as overstated property taxes and failure to consider the effect of the NECEC on local economies. NRCM Initial Br. at 18-19; Caratunk Initial Br. at 36-38.

The IECG observes that the USM and LEI Studies show macroeconomic benefits for Maine that are highly consistent with one another. IECG Initial Br. at 31. The IECG agrees with GINT that, as a general matter, lost tax revenues and employment from shutdowns or cutbacks at existing Maine generators are appropriately included in this type of analysis; however, the IECG disagrees with GINT’s position that the NECEC would cause any such shutdowns or cutbacks. *Id.* at 32. Other parties, including the Chamber, Lewiston, IBEW, and WM&RC, support the Project due to the economic benefits it will provide at the local level through increased employment, property tax revenue, and eco-tourism opportunities.

3. Discussion

The Commission finds both the USM and LEI Studies to be supportive of the fact that positive and substantial direct, indirect, and induced macroeconomic benefits will accrue to Maine from the development, construction, and operation of the NECEC. Although the numbers of jobs and dollar increases in GDP cannot be precisely quantified, the Commission finds that the range reflected by the USM and LEI Studies

²⁸ The LEI Study, which does include the effects of the NECEC on generator retirement, concludes that most of the impact will be on generators in other states, and there would be only a minor impact in Maine. LEI Report at 35.

provides a reasonable estimate. Moreover, the Commission agrees with the observation of CMP that a \$1 billion investment in a project located entirely in Maine, with the resulting employment and taxes it will produce, would result in substantial macroeconomic benefits to the State. CMP Initial Br. at 32. With respect to offsetting negative impacts due to premature shutdowns or cutbacks of Maine generators, for the reasons discussed in Section V(A)(5) above, the Commission finds that such shutdowns or cutbacks, if they occur, are not attributable to the NECEC. And, with respect to deferral of investment, the Commission notes that, according to the LEI Study, any such deferrals would affect new investment in Massachusetts, not Maine. LEI Report at 63. Finally, as will be discussed in Section V(D) below, the NECEC will have an adverse effect on scenic and property values, and local tourism and recreational economies, which cannot be quantified. These adverse economic impacts offset to some degree the economic benefits of the Project.

C. Public Health and Safety

1. Background

Section 3132(2-C)(A) directs the applicant for approval of a CPCN to include in its petition, among other things, “[a] description of the effect of the proposed transmission line on public health and safety.” Section 3132(6) directs the Commission to, in determining public need for the proposed project, consider the project’s impact on “public health and safety.”

2. Public Health

In its initial filing in this case on September 27, 2017, CMP indicated it had retained Exponent, Inc. to conduct an electric and magnetic fields (EMF) study for the NECEC which would be submitted as a supplement to CMP’s initial petition when the report is completed. On January 12, 2018, CMP filed Exponent’s report titled *Modeling of the Electrical Environment, Report New England Clean Energy Connect Transmission Project* (Exponent Report). CMP Exh. NECEC 16. The Exponent Report presents the EMF levels and ion densities for transmission lines and interconnections (1) along the NECEC route and (2) in portions of the transmission system in which CMP proposes to complete necessary upgrades.

CMP summarizes the findings and conclusions of the Exponent Report as follows:

Exponent found that the NECEC HVDC line will produce static EMFs similar to those encountered in the natural environment, with magnetic-field levels similar to the earth’s static geomagnetic field and electric-field levels similar to those produced by atmospheric phenomena, weather, and friction charging. Such levels are below the National Radiation Protection Board’s threshold that static fields above 25 kV/m may be annoying, and well below International Commission on Non-Ionizing Radiation Protection (ICNIRP) and Food and Drug

Administration guidelines for static magnetic-field exposure. Exponent also concluded that calculated ion densities for the project are within the range of levels encountered in the natural environment, and the new AC lines associated with the NECEC's necessary network upgrades will produce EMF levels that are well below the assessment criteria established by ICNIRP and the International Committee on Electromagnetic Safety.

CMP Initial Br. at 122-123.

The scope of issues addressed, and conclusions reached, in the Exponent Report received relatively little attention in this proceeding. CMP argues: "In discovery, CMP made clear its intent to focus on EMFs as the only public health impact that CMP will be investigating. No party has submitted any testimony contesting Exponent's findings or demonstrated any other health concern related to the NECEC." *Id.* at 123.

WM&RC echoes CMP's argument that no testimony has been presented in this case that contradicts the findings of the Exponent Report. WM&RC Initial Br. at 16.

Ms. Kelly argues that the Exponent Report is flawed and that CMP has failed to make a sufficient showing that the NECEC does not present risks to the public health. Referring to the Exponent Report, Ms. Kelly asserts:

It is a narrow report that uses models developed in 1983 to 1991 to determine static electric fields, magnetic fields and air ions associated with the operation of the DC and AC portion of the NECEC project. There was no mention of experimental testing to validate the modelling, not even on the AC modelling where the transmission lines are already in existence. The report makes no representation about whether these values will be guaranteed maximum levels or even within an order of magnitude to the levels that will exist once the line is constructed and used over time.

Kelly Reply Br. at 8. Ms. Kelly outlines what she considers to be additional flaws in the Exponent Study and concludes that CMP has failed to demonstrate that the NECEC adequately protects the public health. *Id.* at 10.

The topic of the NECEC's impacts on public health rarely came up during the three public witness hearings that the Commission held in this case. The most specific testimony on health issues relating to the Project was provided by Julie Tibbetts, a medical technologist specializing in oncology and hematology. Ms. Tibbetts noted that, although the ill effects of living under high tension power lines is debatable, both the World Health Organization and the Center for Disease Control acknowledge that increased electromagnetic fields increase the risk of various health issues, including heart arrhythmias and cancer. The Forks PWH Tr. at 81-82 (Sept. 14, 2018).

3. Public Safety

As with the public health issues relating to the NECEC, issues relating to the public safety implications of the Project were addressed by only a few parties in this proceeding. Regarding the public safety issues relating to the NECEC, CMP asserts:

CMP has committed to design and construct the project in accordance with the applicable North American Electric Reliability Corporation (NERC), Northeast Power Coordinating Council, Inc. (NPCC) and ISO-NE transmission planning standards and criteria as well as all applicable safety codes including the National Electric Safety Code (NESC), the American National Standards Institute (ANSI) standards, and the Occupational Safety and Health Administration standards, among others. CMP's lead engineer responsible for the design of the project, Justin Tribbet, also described CMP's commitment to project safety for the NECEC, including the retention of a full-time safety engineer tasked with reviewing the project designs to ensure that they comply with applicable OSHA standards. No party has offered testimony demonstrating in any way that the NECEC will be designed, constructed or operated in an unsafe manner.

CMP Initial Br. at 123-124.

WM&RC asserts that no party introduced evidence asserting or demonstrating that "the construction, operation, or maintenance of the NECEC will be inconsistent with applicable standards (i.e., NERC, NPCC, ISO-NE) and would jeopardize public health and safety." WM&RC Initial Br. at 16.

Caratunk raised issues relating to the host communities' ability to provide adequate accommodations for work crews on the Project. Caratunk also argues that CMP did not consider whether the affected communities in rural Somerset County would be able to provide adequate fire and emergency response services during the construction of the Project and after the Project is complete. Hearing Tr. at 123-124; 126 (Jan. 9, 2019).

Similar concerns about whether local emergency services would be able to respond to the potential public safety issues posed by the NECEC were raised during the public witness hearings. For example, Heather Sylvester noted that the West Forks Volunteer Fire Department is small and primarily a volunteer department and that members work full-time jobs out of the area. Ms. Sylvester expressed her concern that potential medical, fire, or trauma events associated with construction of the NECEC may tax such small and primarily volunteer departments. The Forks PWH Tr. at 12 (Sept. 14, 2018).

In responding to these concerns on behalf of CMP at the January 9, 2019 hearing, Mr. Stinneford noted that CMP has existing transmission lines that traverse areas of Maine that are equally or even more remote than the NECEC corridor. Hearing Tr. at 126 (Jan. 9, 2019). According to Mr. Stinneford, there are CMP transmission lines that run through many unorganized townships that have no fire departments and no

public safety resources, noting that the public safety issues raised by Caratunk (and others) are issues that CMP is accustomed to. *Id.*

4. Discussion

As noted above, issues relating to the NECEC's effect on public health and safety were not addressed by many of the parties in this proceeding. Based on the Commission's review of the record, the Commission concludes that CMP has, through the Exponent Report and the written and oral testimony by Mr. Malone, Mr. Hodgdon, Mr. Tribbet, and Mr. Stinneford, satisfied the filing requirements relating to public health and safety set forth in section 3132(2-C) and provide a sufficient basis for the Commission to consider these issues pursuant to Section 3132(6).

In her Exceptions, Ms. Kelly takes issue with the lack of attention to safety that is incorporated into the Examiners' Report. Kelly Exceptions to Examiners' Report at 2-3. The Commission emphasizes that ensuring public safety with respect to public utility operations is a central purpose of the Commission outlined in Section 101 of Title 35-A. That section states that the "basic purpose of this regulatory system is to ensure safe, reasonable, and adequate service." The above ground HVDC line is designed by professional engineers who by the nature of their training and licensure requirements attest to safety when final stamping of the design occurs. While there were many issues in this case that were raised during the 18 months of litigation, this Order details the areas of disagreement of the parties and makes findings with respect to statute. The Commission does not agree that it is necessary in this case to have had hired a consultant on these matters when licensed engineers responsible for the design were witnesses and were available for cross examination.

The Commission finds that, with respect to the safety concerns raised by Caratunk, Ms. Kelly, and several public witnesses relating to the availability of fire protection and other emergency response services in the proposed transmission corridor, the record reflects that CMP has adequately addressed such safety concerns throughout other remote areas of its existing transmission system. The Commission, therefore, finds that the NECEC does not pose a threat to public health and safety. However, it is evident that there are ongoing concerns about safety issues posed by the NECEC. The Commission therefore directs CMP to, as part of its ongoing outreach and communications with the host communities, provide direct and clear information to the affected community about how CMP (1) has dealt with fire and medical support issues in comparable rural areas of its system and (2) plans to deal with fire and medical support issues in the context of the NECEC.

D. Scenic, Historic, and Recreational Values

1. Background

Section 3132(6) directs the Commission to, in determining public need for the proposed project, “at a minimum, take into account ... scenic, historic and recreational values.”

As discussed in Section IV(C) above, there is overlapping jurisdiction among the Commission, the DEP, and the LUPC regarding the review of such things as the NECEC’s impact on scenic, historic, and recreational values. Several parties in this case suggested the Commission defer to the DEP and LUPC’s evaluation of scenic, historic, and recreational values. For the reasons outlined in Section IV(C) above, the Commission finds that in the context of this proceeding, it is required by statute to consider the specified issues of scenic, historic, and recreational values as part of its overall assessment of the benefits and costs of the NECEC.

To discharge its responsibilities under Section 3132 with respect to consideration of scenic, historic, and recreational values, the Commission must engage in a two-step balancing process. Step one involves the Commission’s evaluation of the NECEC’s impacts on scenic, historic, and recreational values. In this initial step, the Commission must weigh and balance the NECEC’s impacts to determine whether the Project will have a net beneficial or a net adverse impact on scenic, historic, and recreational values. Step two is a more comprehensive balancing activity in which the Commission must weigh its determination of the NECEC’s impact on scenic, historic, and recreational values against the other factors listed in Section 3132(6) which include economics, reliability, state renewable energy generation goals, the proximity of the proposed transmission line to inhabited dwellings, and alternatives to construction of the transmission line, including energy conservation, distributed generation or load management. At the conclusion of the second step of the balancing process, the Commission will be able to determine whether sufficient public benefits exist to justify the issuance of the requested CPCN.

In this Section of the Order, the Commission focuses on only the impact of the NECEC on scenic, historic, and recreational values. The more comprehensive balancing of these impacts and the other factors set forth in Section 3132(6) is addressed in Section V(D)(5)(e) of this Order.

2. Positions of the Parties

a. Scenic Values

There is wide disagreement between the proponents and the opponents of the NECEC relating to the impacts the Project will have on scenic values. To begin with, parties disagree over the current scenic value of the affected area. Some parties argue that the proposed new corridor will run through a pristine wilderness, while others assert the area in question is more properly characterized as a heavily-harvested working forest. Parties also differ on the extent to which the Project will alter the current character of the area in question. Finally, the parties disagree on whether CMP

sufficiently analyzed the scenic impact of the NECEC and whether CMP adequately explored lower-impact options.

i. Proponents of the Project

CMP asserts that the NECEC is designed to minimize adverse impacts on scenic values. CMP notes that, where reasonably practical, the NECEC is sited in an existing transmission corridor to minimize impacts, and where new corridor is needed the Project is designed to reasonably avoid environmentally sensitive areas and resources, including conserved lands, stream crossings, wetlands, deer wintering habitat, and inland waterfowl and wading bird habitat. CMP notes, further, that approximately 73% of the NECEC route lies within CMP-owned, existing transmission corridor, and that the remainder of the route is located on nearly all privately-owned, commercial forest land, better allowing CMP to site the project to avoid adverse impacts on scenic, historic, and recreational values. CMP Initial Br. at 124.

A major issue of contention in the scenic value debate is the current quality of the 53 miles of new corridor. On this point, WM&RC argues that, as shown by the Natural Resource Maps provided by CMP in response to the September 12, 2018 Procedural Order, the land that will be the site of the new transmission corridor extending to the Canadian border are working forests that have been heavily harvested in recent years. Thus, according to WM&RC, the transmission corridor should not unreasonably detract from the scenic, historic and recreational values offered by these areas. WM&RC Initial Br. at 16.

Two other major points of disagreement between those who support the Project and those who oppose it are whether CMP (1) sufficiently analyzed the scenic impact of the NECEC and (2) adequately explored lower-impact options. CMP argues that it went to great lengths to consider the impacts of the new corridor on scenic values and to take steps to reduce the extent of those impacts. On these points, CMP states that it designed the Project to comply with DEP requirements that a transmission project not unreasonably interfere with existing scenic and aesthetic uses of resources within and nearby the project area, or Area of Potential Effect. CMP notes that, in accordance with these requirements, it prepared a comprehensive Visual Impact Assessment that articulates its methodology for determining potential visual impacts of the Project, and establishes clear mitigation strategies for minimizing impacts. CMP Initial Br. at 124-125.

ii. Opponents of the Project

The opponents of the NECEC focus primarily on the portion of the line that would be constructed in the new corridor. NRCM asserts that the route of the NECEC would disturb 53 new miles of habitat from Beattie Township to Caratunk, and would clear over 1,800 acres of land, cross 115 streams, disturb 263 wetlands covering 76.3 acres, and cross 8 deer wintering areas and 12 inland waterfowl and wading bird habitat areas. NRCM Initial Br. at 21. NRCM argues that the NECEC is likely to have a permanent

and dramatic impact to environmental and scenic resources, along the line, most notably along the 53 miles currently undisturbed by transmission lines. *Id.*

Caratunk asserts that the characterization by CMP of the 53 miles of proposed corridor as “working forest,” as if to say an already spoiled landscape, is dismissive of local concerns and is untrue and disrespectful. Caratunk Initial Br. at 11. Caratunk notes, further, that clear-cuts in a working forest grow back, but the NECEC corridor will not. Caratunk Comments on Stip. at 8 (Mar. 1, 2019).

Caratunk also argues that CMP’s analysis of the NECEC’s impacts on the scenery along the proposed 53 miles of new corridor was inadequate. Caratunk argues that CMP’s Visual Impact Analysis was insufficient, noting that the DEP found it to be “sorely lacking” and “sent them back to the drawing board.” Caratunk Initial Br. at 11-12. Caratunk is also critical of the adequacy of CMP’s consideration of installing the proposed new line underground. *Id.* at 11. Caratunk asserts that the relatively superficial analyses CMP conducted regarding Project impacts is extremely disturbing to the local communities and to those whose livelihoods and families are at stake. *Id.*

iii. Testimony Presented During Public Witness Hearings

The disagreement over the NECEC’s impacts on scenic values was nowhere more apparent than during the three public witness hearings the Commission held in this proceeding. Comments were provided by those that supported the Project and disagreed with the proposition that the NECEC would go through wilderness that was pristine, including by Richard B. Anderson, a former Commissioner of the Maine Department of Conservation and Executive Director of the Maine Audubon Society, and Lloyd Ireland who served as Maine’s Director of Public Lands and also as State Economist during the 1980s. Farmington PWH Tr. at 50-51 (Sept. 14, 2018); Hallowell PWH Tr. at 109 (Oct. 17, 2018).

Other commenters offered a different perspective. Former State Senator Thomas Saviello noted that, notwithstanding the fact that the new corridor would be located in areas that are currently forested, the impact of the NECEC would be significant, noting that the NECEC clear cut corridor will not grow back. Farmington PWH Tr. at 11-12 (Sept. 14, 2018).

Speaking to the amount of logging traffic currently in the area of the proposed new corridor, Jennifer Poirier testified she seldom even passes a logging truck. Ms. Poirier also echoed Senator Saviello’s comments about the permanent nature of the NECEC clear-cut in contrast to forest harvesting, in which case the trees come back. The Forks PWH Tr. at 72-73 (Sept. 14, 2018).

Many other commenters spoke with passion about the scenic value of the area, noting the significance of the area’s beauty, remoteness, and lack of development. Commenters noted that these attributes not only contributed to their own quality of life, but were integral to drawing visitors who sustain the local tourist economies to the

region. Robert Kimber (Farmington PWH Tr. at 68-69 (Sept. 14, 2018)); Drew Bates (*Id.* at 81); Todd Towle (*Id.* at 46); Cecil Gray (Hallowell PWH Tr. at 31 (Oct. 17, 2018)).

Finally, in written comments that were read by Susan Percy, Field Rider stated, with some irony, that the remoteness and low population density of the area through which the proposed new corridor would run make it both attractive to tourists and vulnerable to projects like the NECEC. Hallowell PWH Tr. at 156 (Oct. 17, 2018).

b. Historic Values

When compared to the Project's impact on scenic and recreational values, the effect the NECEC would have on historic values received relatively little attention by the parties in this proceeding. In support of the steps it took to consider the Project's potential effects on historical values, CMP noted that it undertook a comprehensive desktop review to identify historic properties potentially affected by the Project. CMP noted, further, that impacts on historic values are undergoing a thorough review by the Maine Historic Preservation Commission and DEP. CMP Initial Br. at 126.

c. Recreational Values

As with scenic values, there is considerable disagreement between the proponents and the opponents of the NECEC regarding the Project's impacts on recreational values. Proponents and opponents disagree on whether CMP adequately identified, and took reasonable steps to avoid, the Project's detrimental impacts on recreational values. Proponents and opponents also disagree on the extent to which the NECEC will degrade recreational values. There is also marked disagreement between the proponents and the opponents on whether there are beneficial recreational effects from the NECEC. Finally, the proponents and opponents disagree on the NECEC's likely effects on tourism in the new corridor portion of the Project.

i. Proponents of the Project

CMP argues that it was mindful of the potential impacts of the NECEC on recreational values and that it took steps when designing the Project to minimize the negative impacts from the Project. CMP Initial Br. at 126-127. CMP argues that the Project route within the new corridor almost entirely avoids sensitive recreational resources, such as state and national parks, and that the remaining portions of the transmission corridor contain existing transmission lines, thus, the addition of the NECEC will have minimal impacts on those areas. *Id.*

CMP asserts that it was receptive to comments about the Project's impacts on the recreational values associated with the crossing of the Kennebec Gorge and made adjustments to the Project in response to those comments. *Id.* at 127. CMP states that it is aware of concerns that have been expressed about the Project's impact on the Appalachian Trail, but believes those concerns lack merit. *Id.* at 127-128.

While stating that the NECEC's detrimental effects on the recreational values in the 53 miles of new corridor are not unreasonable, CMP further asserts that the Project will have positive effects on the recreational values of the area through which the new corridor passes. CMP states that its "siting of the NECEC will also facilitate snowmobile touring, one of Maine's primary winter recreational industries." *Id.* at 128. CMP points to this as a benefit to tourism in Somerset County by strengthening one of Maine's strongest recreational industries and the local economies in which the snowmobile riders spend time. *Id.*

ii. Opponents of the Project

The opponents to the NECEC state that the negative impacts of the Project on recreational values of the host communities are undeniable and substantial. On this point, Caratunk notes that installing 100-foot-tall transmission towers along a new corridor as wide as the New Jersey Turnpike through relatively undeveloped western Maine will have numerous, significant, and permanent impacts. Caratunk Initial Br. at 10. Caratunk describes this conclusion as "self-evident." *Id.*

The opponents to the Project contest CMP's assertions that it was (1) mindful of the potential impact of the NECEC on recreational values and (2) took sufficient steps when designing the Project to minimize negative recreational impacts. For example, Caratunk argues that CMP did not adequately identify or analyze the Project's impacts on recreational values, describing CMP's consideration of these matters as after-the-fact and dismissive. *Id.* at 13.

Caratunk also contests CMP's claim that the Project will attract snowmobilers. First, Caratunk argues that CMP failed to do the analysis necessary to support the claim that the NECEC will promote snowmobiling in the area. Second, Caratunk refutes CMP's assertion that snowmobilers will be attracted to the new corridor. *Id.* at 10. Caratunk argues that, to the contrary, if given the choice, the snowmobile community will elect not to ride on a trail in the proposed new corridor. Caratunk Reply Br. at 11-12.

Caratunk also refutes CMP's assertion that it actively engaged the communities along the proposed new corridor and modified the Project design based on feedback from the local stakeholders. Caratunk describes CMP's efforts and analysis in this regard as unsupported and inaccurate. Caratunk Initial Br. at 13.

iii. Testimony Presented During Public Witness Hearings

As with the public witness testimony on the NECEC's impact on scenic values, testimony on the Project's effects on recreational values was quite divided. With respect to CMP's position that the NECEC provides recreational value benefits related to snowmobiling, Mr. Bob Meyers, who is the Executive Director of the Maine Snowmobile Association, Inc. (MSA), presented testimony in support of this proposition, noting that the entire length of the new corridor would be open to snowmobile access,

thus, creating significant new opportunities for Maine residents and non-residents. *Hallowell PWH Tr.* at 44-46 (Oct. 17, 2018).

However, other members of the MSA testified that such benefits are illusory. For example, Tania Merrett and John Willard testified strongly against the proposition that snowmobilers would want to ride under a power line. *Id.* at 60-61.

Two other themes that were repeatedly addressed in public witness hearing testimony were the wild nature of the area and the broad appeal that the wilderness has for people. Tony Diblasi, a registered Maine Guide, testified to the natural splendor of the region and the wilderness river trips he has shared with people from around the world. *The Forks PWH Tr.* at 42 (Sept. 14, 2018).

Greg Caruso, a resident of Caratunk and owner of Maine Guide Services LLC, testified to his experience in guiding visitors who come to the region for whitewater rafting, hunting, and ATVing and snowmobiling. In particular, Mr. Caruso noted that visitors come to the region to get away from the modern industrial world, and that comments he has heard from thousands of visitors reinforce the importance of the region's beauty, remoteness, and silence. *Id.* at 118-120.

These comments were echoed by other public witnesses who articulated their concerns about the effect the Project would have on their own quality of life, as well as on the Maine economy. Witnesses noted that the economic impacts would be felt not only in the communities in proximity to the Project, but also statewide, citing the negative impact the Project would have on the "Maine Brand." Kate Stevens (*Hallowell PWH Tr.* at 121 (Oct. 17, 2018)); Monica McCarthy (*Id.* at 67-69); Beverly Hughey (*The Forks PWH Tr.* at 129 (Sept. 14, 2018)); Jan Collins (*Farmington PWH Tr.* at 104 (Sept. 14, 2018)); Heather Sylvester (*The Forks PWH Tr.* at 125 (Sept. 14, 2018)); Eric Sherman (*Id.* at 59).

3. CMP's Efforts to Mitigate the NECEC's Adverse Impacts on Scenic, Historic, and Recreational Values Through the Negotiation of an MOU with WM&RC

a. Background

CMP's mitigation efforts relating to the NECEC's detrimental effects on the host communities in Somerset County have focused on CMP's Memorandum of Understanding (MOU) with WM&RC and the placement of the transmission line under the Kennebec Gorge. On May 30, 2018, CMP and WM&RC entered into an MOU. CMP Exh. NECEC 25. In the MOU, WM&RC is identified as

a Maine nonprofit public benefit corporation that was formed for the purpose of expanding conservation of the Kennebec, Dead, Sandy, Moose, Sebec and Carrabassett rivers; developing recreation projects; developing education

programs about the history, ecology and uses of Maine's rivers; and expanding economic development opportunities along the rivers of Western Maine.

WM&RC MOU at 1, Section C.

The MOU provides that "CMP and WM&RC wish to establish a framework to mitigate any environmental, natural resource and community impacts of the Project and to provide additional economic development opportunities to Somerset County." *Id.*, Section (D).

Section 4(a) of the MOU addresses the situation in which the Project crosses the Kennebec Gorge overhead and provides that, under such circumstance, CMP will provide WM&RC a lump sum of \$22 million. Sections 4(a)(iii) and (iv) provide a breakdown of the \$22 million that CMP will pay to WM&RC in the event of an overhead crossing, and state that CMP will:

(iii) Contribute in a lump sum to the trust described in Section 4(c) \$16,000,000 to support and enhance tourism and outdoor recreation in the Central and Northern Somerset County, including construction, operation and staffing of a visitor center, maintenance of trails, funding of education programs to improve the local tourism economy; WM&RC commits to leverage these grant funds to obtain funds from philanthropic donations, the local tourism bureau, local businesses and other sources to the maximum extent possible.

(iv) Contribute in a lump sum to the trust described in Section 4(c) \$6,000,000 to fund maintenance costs associated with the tourism infrastructure described in clause (iii) above and for continued funding of education and other programs to improve the local tourism.

Section 4(b) of the MOU addresses the situation in which the Project crosses the Kennebec Gorge underground and provides:

(b) In the event that the Project is constructed such that it (i) crosses the Kennebec Gorge underground, (ii) crosses overhead at Harris Dam, or (iii) completes the Project by any other overhead or underground crossing of the Kennebec or Dead rivers, and subject to the Preconditions being met, CMP agrees to contribute in a lump sum to the Trust described in Section 4(c) to support the programs described in clause (a)(iii) above of at least \$5,000,000, but in no case exceeding \$10,000,000.

The MOU provides specific instructions regarding WM&RC's participation in the regulatory review process of the NECEC.

At the request of CMP, WM&RC will provide written and/or oral testimony to one or more regulatory agencies with the power to issue one or more of the Required Approvals. The essence and extent of WM&RC's testimony will be that

the mitigation packages for the crossings described in Sections 4(a) and 4(b) of this MOU are appropriate offsets to the environmental, natural resource and community impacts of the Project because the benefits of the packages to the region are substantial and long lasting.

Id. at 6, Section 7(a).

In its September 27, 2017 Petition, CMP included an NECEC Communications Plan (Communications Plan). CMP Exh. NECEC 9. The Communications Plan emphasizes such things as keeping key stakeholders well-informed through early and frequent outreach activities and building trust throughout the area where the Project will be built. CMP Petition at 88-89.

b. Positions of the Parties

The proponents and opponents of the NECEC are divided on CMP's efforts to mitigate the Project's detrimental impacts on scenic and recreational values. The proponents and opponents also differ on the sufficiency of CMP's outreach activities and CMP's communication efforts with key stakeholders regarding the negotiation and content of the MOU. Proponents and opponents disagree on the following aspects of CMP's MOU with WM&RC: (1) the legitimacy of WM&RC, (2) the sufficiency of funding provided by the MOU, and (3) the adequacy of the way MOU funds are allocated.

i. Proponents of the Project

CMP states that the MOU "was the result of extensive discussions with WM&RC representatives that began in Spring 2017 regarding the project's river crossing at the Kennebec River Gorge and Moxie Stream in Somerset County." CMP Initial Br. at 81. CMP summarizes the terms of the WM&RC MOU as follows:

CMP has provided WM&RC with a \$250,000 initial donation, and will, subject to the NECEC's receipt of all relevant regulatory approvals, provide additional annual grants of \$50,000 to WM&RC for five years, to support WM&RC's charitable mission, including, in particular, the promotion of outdoor activities in central and northern Somerset County and the improvement of the current trail and track network in those areas. To ensure that the NECEC does not unreasonably interfere with or adversely affect existing scenic, aesthetic, recreational or navigational uses, CMP has also consulted with WM&RC on the design, construction, and ongoing maintenance plan for the NECEC in the vicinity of the Kennebec Gorge.

As part of the MOU, CMP has also agreed to certain measures regarding relevant, CMP-owned land in the NECEC project area, including to negotiate in good faith with businesses operating on land leased from CMP regarding options to purchase such land, to consider making available for purchase land that is not essential for CMP's current or anticipated future needs, and to cooperate in good

faith in facilitating access to the NECEC corridor for recreational uses, consistent with applicable law. In the event that CMP constructs the NECEC, the Company has also agreed to facilitate broadband, wide area Wi-Fi, and other enhanced communication services for the residents and business of Somerset and Franklin counties by laying an optical ground cable with multiple strands of fiber-optic cable, at CMP's sole expense. CMP has also agreed to additional mitigation measures based on the NECEC's proposed underground crossing of the Kennebec Gorge. The Company has established and will fund an irrevocable Maine charitable trust fund to support and enhance tourism and outdoor recreation in central and northern Somerset County and contribute a lump sum of at least \$5 million, and as much as \$10 million, to fund maintenance costs associated with such tourism infrastructure. All of these provisions provide real and tangible benefits to Somerset County.

Id. at 81-82.

Other proponents of the Project assert that the benefits included in the MOU are substantial and provide significant mitigation of any negative impacts to the host communities in Somerset County that may result from the NECEC. In its initial brief in this case, WM&RC describes the provisions of the MOU and the benefits the MOU would provide to the people of Somerset County. WM&RC concludes that the record supports a finding that the various financial and non-financial contributions offered by CMP under the MOU will likely provide additional economic development opportunities in western Maine and Somerset County. MW&RC Initial Br. at 8-9.

The Chamber argues that the MOU will provide robust economic development opportunities for the promotion of outdoor activities and tourism in that part of our State. Chamber Initial Br. at 5.

Regarding CMP's broader outreach and communications activities, CMP witnesses were questioned during the January 9, 2019 hearing about the adequacy of CMP's implementation of its Communications Plan. CMP witnesses stated repeatedly that CMP's pre- and post-filing outreach efforts were robust, that the outreach team was committed to complying with the requirements of the Communications Plan, and that, knowing what it knows now, CMP would not change the way it conducted its outreach efforts. Hearing Tr. at 115, 121-122 (Jan. 9, 2019).

ii. Opponents of the Project

Opponents of the Project are critical of CMP's MOU with WM&RC on four fundamental grounds. First, opponents question the legitimacy of WM&RC and whether it sufficiently represents the people in Somerset County who would be directly affected by the Project. Second, opponents argue that CMP has not done the analysis necessary to quantify the damage caused by the new corridor. Third, opponents assert that, notwithstanding CMP's failure to conduct any analysis of the monetary damage caused by the Project, it is clear that the amount offered by CMP in the MOU (between

\$5 million and \$10 million) is insufficient to offset the damages caused by the Project. Finally, opponents assert that the mitigation included in the MOU is not equitably distributed among those along the new corridor who will be most harmed by the Project.

Regarding the legitimacy of WM&RC, Caratunk asserts that the WM&RC is simply a shell organization created by CMP, noting that the MOU also requires WM&RC to proactively support NECEC in front of governmental bodies. Caratunk Initial Br. at 38.

Opponents also assert that CMP has not conducted a sufficient analysis to quantify the impacts of the proposed new corridor on scenic and recreational values and tourism. Relating the lack of analysis and quantification of the harm caused by new corridor to the adequacy of the benefits package contained in the MOU, Caratunk questions how a proper mitigation package could ever be determined. *Id.* at 27.

In questioning the adequacy of the MOU's funding for Somerset County residents, Caratunk notes the indefinite amount of funds being committed (somewhere between \$5 million and \$10 million) and complains that this uncertainty makes it difficult to evaluate the actual value of the mitigation package. Hearing Tr. at 75 (Jan. 9, 2019). Caratunk adds that the MOU is structured in a way that places primary emphasis on the crossing of the Kennebec Gorge and further notes that CMP's decision to underground that portion of the line substantially reduced the value of the mitigation package from a guaranteed amount of \$22 million to a guaranteed amount of \$5 million. Caratunk Initial Br. at 38. Caratunk asserts that this \$5 million is insufficient to offset the damage caused by the Project to the people of Somerset County.

In addition to the MOU providing insufficient funding, Caratunk argues that the MOU is structured in a way that inequitably distributes those insufficient mitigation dollars. Speaking to the mismatch between the beneficiaries of the MOU and those who would be most harmed by the Project, Caratunk argues that funds should be directed to where the direct impacts will be. *Id.* at 27.

In addition to its criticism of the contents of the MOU, Caratunk also criticizes CMP for its failure to include any Caratunk Town officials in any of its negotiations with WM&RC regarding the MOU. Hearing Tr. at 112-113 (Jan. 9, 2019). Finally, Caratunk criticizes CMP's broader outreach and communications activities and its failure to comply with its Communications Plan. *Id.* at 116.

iii. Testimony Presented During Public Witness Hearings

Public witness hearing testimony relating to WM&RC and the MOU focused primarily on two issues: (1) whether WM&RC was representative of the affected local communities and (2) whether the MOU allocates mitigation funds to the proper people.

In their Procedural Order issued on September 6, 2018, the Examiners noted: "These public witness hearings are being held pursuant to Chapter 110, Section 8(B)(6) of the Commission's Rules to allow persons who are not parties in this case to present

testimony or argument to the Commission.” Consistent with the September 6th Order, no person testified on behalf of WM&RC at any of the public witness hearings. But, there was a great deal of testimony critical of WM&RC and the MOU regarding each of the two issues. Witnesses testified that WM&RC does not speak for them, some even expressing feelings of betrayal. Ed Buzzell (Forks PWH Tr. at 78 (Sept. 14, 2018)); Julie Tibbetts (*Id.* at 82);

In the opinion of others, the MOU and the process that led to it was described as a “done deal” put together by CMP behind the scenes. Cecil Gray (Hallowell PWH Tr. at 30 (Oct. 17, 2018)); Former Senator Howard Trotsky (*Id.* at 160).

There was no testimony during the public witness hearings that explicitly referenced CMP’s Communications Plan or whether CMP had complied with that Plan. However, there was testimony about CMP’s trustworthiness, which the Plan noted as a goal for CMP to be achieved through its outreach and communications efforts in the affected communities. Several witnesses spoke critically of CMP’s trustworthiness, citing presentations about the Project by CMP that were “deceptive” and meetings in which county commissioners and residents were told “half-truths”. Vaughan Woodruff (Farmington PWH Tr. at 34-37 (Sept. 14, 2018)); Beverly Hughey (The Forks PWH Tr. at 130 (Sept. 14, 2018)); Former Senator Saviello (Farmington PWH Tr. at 7 (Sept. 14, 2018)); Eric Sherman (The Forks PWH at 49 (Sept. 14, 2018)); Kathy Barkley (*Id.* at 46); Pete Dostie (Hallowell PWH Tr. at 105 (Oct. 17, 2018)).

4. Balancing the NECEC’s Impacts on Scenic, Historic, and Recreational Values with CMP’s Mitigation Efforts

In addition to evaluating the Project’s positive and negative impacts on the scenic, historic, and recreational values in and around the new corridor, and CMP’s efforts to identify and mitigate the detrimental impacts of the Project, the Commission must also balance the totality of the impacts and mitigation to determine the NECEC’s net impact on scenic, historic, and recreational values. Not surprisingly, the proponents and opponents of the Project have different positions on how the Commission should do the balancing and the results of that balancing activity.

a. Proponents of the Project

The proponents note that Section 3132 and Chapter 330 provide little guidance on how the Commission should weigh the various impacts of the Project and then compare and balance those impacts. CMP describes the process as “flexible,” reflecting the context of the circumstances that exist at the time of the determination. CMP Initial Br. at 8. The IECG argues that the public interest balancing takes into account all relevant information contributing to the determination of whether the Project provides a positive net benefit to energy consumers. IECG Reply Br. at 16.

The IECG notes, further, that this case presents many benefits and detriments that are difficult to quantify and weigh. On this point, the IECG warns that “the complexity of many of the issues raised by the parties and the volume of such issues

have the potential to confuse the analysis and to obscure the value of benefits of NECEC that are substantial and indisputable.” *Id.* at 2. The IECG adds that it “is confident that the Commission and its staff have the technical expertise to evaluate the record on these issues and to make appropriate findings, but the complexities are dwarfed by the indisputable.” *Id.* The IECG notes that some issues are more difficult to quantify and argues that “rather than ‘wandering into the weeds’ to address these issues in significant detail,” the Commission should stay focused on the more easily quantifiable benefits of the Project “that are known to exist with a high degree of certainty.” *Id.*

WM&RC echoes the IECG’s comments about the complexity of the issues relating to scenic, historic, and recreational values and argues that, with respect to in-depth assessments of the Project’s impacts upon the natural environment and existing uses of lands, the Commission should defer to the Maine DEP and LUPC because they are the agencies charged to make such evaluations and have the expertise to do so. WM&RC initial Br. at 18. Notwithstanding its recommendation that the Commission defer on such issues, WM&RC concludes: “The Commission should find that any intrusions of the Project upon the scenic, historic and recreational values are not unreasonable and are outweighed by the benefits of the Project.” *Id.*

b. Opponents of the Project

The opponents to the Project make two fundamental points regarding the balancing of the Project’s beneficial and detrimental impacts. First, the opponents assert that CMP has failed to conduct sufficient analysis of the NECEC’s detrimental impacts on the scenic, historic, and recreational values associated with the Project. Second, the opponents argue that, in spite of CMP’s insufficient analysis, the record in this docket supports a finding that, on net, the NECEC is harmful to scenic, historic, and recreational values.

Regarding the sufficiency of CMP’s analysis, Caratunk argues that CMP’s failure to adequately examine the Project’s impacts compromises the Commission’s ability to weigh and balance those impacts. Caratunk Initial Br. at 42-43. Caratunk argues, nevertheless, that there is evidence in the record that shows how the NECEC will result in significant impacts to natural resources, and that it could cause economic harm to the local economy. *Id.*

NextEra makes a similar point, focusing on CMP’s failure to analyze the possibility of placing the portion of the proposed transmission line from The Forks to the Canadian border underground. NextEra argues because of CMP’s failure to provide any substantive evaluation of the scenic and recreational values impacted by NECEC for the 53 miles of greenfield forested corridor, its request for a CPCN should be denied. NextEra Initial Br. at 32-33

On the other hand, GINT argues that there is ample discussion in the record of the environmental harms that would be caused by NECEC, upon which the Commission can render a determination. GINT Initial Br. at 75.

5. Discussion

a. The NECEC's Impacts on Scenic Values

There was little discussion in this case regarding the portions of the NECEC that would lie within CMP's existing transmission corridor. The Commission's assessment on the Project's impacts on scenic values therefore focuses on the 53 miles of proposed new corridor that runs from the Canadian border in Beattie Township to the Town of Caratunk.

As noted above, some proponents of the Project characterize the proposed 53-mile corridor as a heavily-harvested working forest that cannot be considered "wilderness." Some opponents refer to the area in question as "pristine." The record suggests that the truth lies somewhere between these two characterizations.

The proposed new corridor would run through a well-managed working forest. That fact is not in dispute. However, the record also confirms that this area has special qualities that are treasured by residents in the area, as well as important to visitors that come to the area to recreate and enjoy its beauty, solitude, and remoteness.

As the testimony indicates, well-managed working forests that are clear-cut grow back, while the proposed new corridor would be cleared and maintained in a way that will not allow it to regenerate. The NECEC would result in the clearing of over 970 acres of land and the transmission line would cross streams, impact wetlands, and have an impact on the flora and fauna in and around the new corridor. The average pole height along the new transmission corridor would be 100 feet tall. Thus, the Commission finds that the Project will have an adverse impact on local scenic values.

The record does not allow the Commission to quantify the NECEC's potential impact on scenic values. However, it is important to note that the NECEC's proposed route is on private land which CMP owns or controls, including existing corridors for 73% of the Project's length. With respect to suggestions that the line should be underground rather than overhead, CMP considered the overhead solution as potentially lower impact given the environmental issues related to burying significant portions of the line underground. In addition, CMP incorporated the following design features to limit the Project's impact on scenic values:

- Adopting a perpendicular crossing to minimize visual impacts from approaching traffic, where the NECEC route intersects U.S. Route 201;

- Distancing the transmission corridor from major access roads, and, where possible, providing for a vegetative screen between the corridor and access roads;
- Siting the NECEC in mountain notches (as opposed to atop mountain peaks) to minimize visual impacts for those in the area, where the project route crosses high elevations, including in the area around Coburn Mountain;
- Installing taller pole structures where the project route crosses Gold Brook in Appleton Township to allow for full height canopy and thus minimize impacts to conservation management areas associated with the Roaring Brook Mayfly;
- Using “tapering” vegetation management methods that will soften the appearance of corridor visible from Rock Pond;
- Using roadside buffers to mitigate visual impacts in the locations in which the NECEC will cross U.S. Route 201 in Johnson Mountain Township and Moscow;
- Using specific vegetation management practices to reduce impacts within the Kennebec Deer Wintering Area, rare species conservation management areas at Mountain Brook in Johnson Mountain Township and Gold Brook in Appleton Township, and Rusty Blackbird habitat areas; and
- Using shorter, 75-foot poles, in the vicinity of Moxie Pond.

CMP Exceptions to Examiners’ Report at 9-11.

Based on the record, the Commission concludes: (1) the scenic value of the area through which the proposed new corridor would run is substantial; (2) the running of an overhead transmission line through this area would have an adverse impact on the scenic value of the area; (3) the Commission is unable to quantify the adverse impact of the NECEC on the scenic value within the area in question; and (4) the DEP and the LUPC, the agencies with expertise in these matters, will conduct expert reviews of the scenic impacts of the NECEC and will, to the extent appropriate and feasible, mitigate these effect through their own proceedings.

b. The NECEC’s Impacts on Historic Values

The question of the NECEC’s impact on historic values received little attention by the parties. As required by Section 3132(2-C)(A), CMP included a description of the effect the Project would have on historic values in its September 27, 2017 Petition. No party in this case offered testimony on this issue and the issue was not directly addressed by any of the people who testified during the three public witness hearings in this case.

Based on the limited record in this case on this issue, the Commission finds that the NECEC will not have an adverse impact on historic values in the area through which it passes.

c. The NECEC's Impact on Recreational Values

As with the Commission's consideration of the NECEC's impact on scenic values, the consideration of the Project's impact on recreational values focuses primarily on the portions of the 53 miles of proposed new corridor that attract tourists and outdoor enthusiasts. The record indicates that the recreational activities that currently take place in the affected area are many and diverse. A partial list of these recreational activities includes: fishing, hunting, birding, moose watching, leaf-watching, star gazing, hiking, camping, rafting, tubing, canoeing, kayaking, snowmobiling, ATVing, skiing, taking photos, swimming, rejuvenating, and relaxing. The record further indicates that visitors come to this area to engage in these, or other, forms of recreation. Finally, the record indicates that the beauty, remoteness, and undeveloped character of the region contribute to its value as a recreational destination.

The record supports a finding that the perpetually-cleared corridor, and the transmission line located in that corridor, will have an adverse impact on the recreational values in the area in question and, a corresponding impact on tourism and the economy in the host communities.

As with NECEC's impact on scenic values, CMP did not attempt to analyze or evaluate the Project's impacts on recreational values and the potential effects on tourism and the local economy. As part of its initial Petition, CMP included the USM Study titled "The Economic and Employment Contributions of the New England Clean Energy Connect in Maine" (USM Study).²⁹ While the USM Study does address several macroeconomic issues relating to the NECEC, it does not consider, or attempt to quantify, the effects of the Project on recreational values, or, more specifically, the micro-impact the Project would have on the tourism industry in the host communities. None of the other studies and analyses filed in this case attempts to quantify the Project's impact on tourism in the affected area. Therefore, the record in this case does not include information that would allow for the quantification of the NECEC's impacts on recreational values and the Commission is left with the task of evaluating such impacts in general terms.

²⁹ CMP Exh. NECEC No 7. The Executive Summary of the USM Study indicates that CMP commissioned MCBER to "to estimate the employment and other economic development impacts provided by the NECEC Project." USM Study at 1. Based on its analysis, MCBER found that "Maine ratepayers and communities will benefit from a reduction in electricity rates and the development, construction, and operations of the NECEC will support significant employment and other economic development impacts in Maine." *Id.*

Based on the record, the Commission concludes (1) the current recreational value of the area through which the proposed new corridor would run is substantial; (2) the NECEC will adversely affect this value; (3) the NECEC's impact on recreational value would have a corresponding impact on tourism and the economy in the host communities; (4) the record does not support the assertion that increases in snowmobile riding or other recreational activity in the new corridor would offset these detrimental effects; (5) the Commission is unable to precisely quantify the extent of the adverse impact the NECEC would have on recreational values of the area in question; and (6) the DEP and the LUPC, the agencies with expertise in these matters, will conduct expert reviews of the recreational impacts of the NECEC and will, to the extent appropriate and feasible, mitigate these effects through their own proceedings .

d. CMP's Efforts to Mitigate the NECEC's Adverse Impacts on Scenic, Historic, and Recreational Values³⁰

There are two sets of issues relating to CMP's mitigation efforts regarding the people of Somerset County. First, the Commission must consider such things as the composition of the WM&RC, and if it adequately reflected the interests of key stakeholders in Somerset County, and the extent to which some stakeholders were excluded from discussions that resulted in the MOU.

The record indicates that CMP's negotiations of its mitigation package for Somerset County took place with a small number of people representing a relatively narrow set of interests. Several key stakeholders, including the Town of Caratunk, were not given an opportunity to see or comment on preliminary drafts of the MOU. There is nothing in the record that adequately explains the reason for this omission.

The second set of issues relating to CMP's mitigation efforts regarding the people of Somerset County that the Commission must consider relates to the specific terms of the MOU and the amount and allocation of mitigation they provide. The MOU provides for:

- A \$250,000 initial donation and additional annual grants of \$50,000 to WM&RC for 5 years, to support WM&RC's charitable mission, including, in particular, the promotion of outdoor activities in central and northern Somerset County and the improvement of the current trail and track network in those areas;
- The creation of an irrevocable Maine charitable trust fund to support and enhance tourism and outdoor recreation in central and northern Somerset County and contribute a lump sum of at least \$5 million, and as much as \$10 million, to fund maintenance costs associated with such tourism infrastructure;

³⁰ CMP's mitigation, outreach, and communications activities discussed in this section address only the process and outcome related to the MOU with WM&RC and the decision to cross the Kennebec Gorge underground, and do not address either the process or outcome related to the February 21, 2019 Stipulation.

- Options to purchase CMP land;
- Access to portions of the corridor; and
- Access to broadband, Wi-Fi and other enhanced communications services to the people of Somerset and Franklin counties.

Although not part of the MOU, CMP has also agreed to the underground crossing of the Kennebec Gorge as part of its impact mitigation in that area.

It is clear that the MOU provides significant and quantifiable benefits. Less clear is how the funds from the MOU will ultimately be spent and who the primary and secondary beneficiaries of those funds will be. It is also evident that the undergrounding of the Kennebec Gorge crossing has positive value, though it is difficult to quantify that value.

In addition to CMP's failure to include key stakeholders, such as the Town of Caratunk, in the MOU process, the Commission finds that CMP's overall outreach and communications activities regarding the Project did not comply with its Communications Plan, which provides that "it is essential to provide clear information, address any concerns, offer Project updates and build trust throughout the area where the Project will be built;" that "interested members of the public want to feel engaged and have their concerns noted and validated by the Project team;" and that such a strategy "leads to the development of meaningful and valuable relationships built on mutual understanding, trust and respect." CMP Exh. NECEC 9 at 2 and 8.

When CMP witnesses were questioned about the adequacy of CMP's implementation of the Communications Plan, they stated repeatedly that CMP's outreach efforts were robust and that the outreach team was committed to complying with the goals reflected in the Communications Plan. Hearing Tr. at 115, 119, 121-122 (Jan. 9, 2019).

However, the record includes substantial criticism about CMP's communications efforts. The criticism accuses CMP of failing to provide some key stakeholders with accurate and timely information about the Project, failing to be transparent, failing to build trust throughout the area, and failing to develop relationships among the affected community that is built on mutual respect.

However, notwithstanding this criticism, Mr. Dickinson stated repeatedly during the January 9th hearing that he is either "incredibly proud" or "very proud" of the outreach team and its efforts on this Project and that, in spite of this criticism, "I can't point to a specific thing that we would do differently." *Id.* Such a response suggests a strong disconnect from the views of members of the host communities and appears at odds with the results achieved by CMP's Communications Plan.

Thus, based on the record in this proceeding, the Commission concludes (1) with respect to some stakeholders, CMP failed to comply with several of the core goals of its Communications Plan; (2) CMP's after-the-fact view of its success in complying with its Communications Plan appears unrealistic; and (3) whether intentional or not, CMP's failure to reach out to, and communicate with, certain key stakeholders compromised those stakeholders' ability to understand the details of the NECEC, evaluate the Project's negative impacts on scenic and recreational values along the proposed new corridor, and to participate in discussions relating to the mitigation of those negative impacts.

In addition to these findings, as noted above, there are a significant number of people in this proceeding who have questioned CMP's trustworthiness.³¹ The assertion that CMP has not been forthright with respect to the NECEC is reflected in the arguments of several opponents to the Project, the testimony of numerous people at the public witness hearings, and the majority of the more than 1,350 public comments the Commission has received in this case.

e. Balancing the NECEC's Impacts on Scenic, Historic, and Recreational Values with CMP's Mitigation Efforts

There are qualitative and quantitative differences between (1) the scenic, historic, and recreational values that are under consideration in this Section of the Order and (2) other factors listed in Section 3132(6), such as economic, reliability, state renewable energy generation goals, and alternatives to construction of the transmission line, that are discussed elsewhere in this Order. The unquantifiable and subjective nature of the NECEC's impact on scenic, historic, and recreational values reverberates repeatedly throughout the arguments of several parties and the testimony provided at each of the three public witness hearings held in this case. Testimony provided at those hearings clearly demonstrates that the assessment of the Project's impact on scenic, historic, and recreational values varies dramatically depending on, among other things, the identity and experience of the commenter. Moreover, the scenic, historic, and recreational impacts of the NECEC are relatively localized, whereas other impacts, such as the market price benefits discussed elsewhere in Section V of this Order, are much broader, if not statewide.

As noted above, neither CMP, nor any other party, provided evidence that would allow the Commission to quantify the NECEC's impact on these values. As a result, the weighing and balancing of the Project's impact on scenic, historic, and recreational values must necessarily be subjective.

Based on the record in this case and the above discussion, the Commission finds that the NECEC will have adverse impacts on the scenic and recreational values in

³¹ There is also some inevitable confounding of unrelated CMP billing and outage matters with any NECEC concerns in some public witness testimony and some public comments with regard to CMP's "trustworthiness."

certain communities in Somerset and Franklin counties, as well as the associated tourism and recreation-based economy in these communities. The Commission also finds that the benefits represented by the MOU and the undergrounding of the line at the Kennebec Gorge are positive and offset the adverse impacts to some extent.

E. Proximity to Inhabited Dwellings

Section 3132(2-C)(A) directs the applicant for approval of a CPCN to include in its petition, among other things, “[a] description of the effect of the proposed transmission line on... the proximity of the proposed transmission line to inhabited dwellings.”³² Section 3132(6) directs the Commission, in determining public need for a proposed project, consider “the proximity of the proposed transmission line to inhabited dwellings.”

The issue of the NECEC’s proximity to inhabited dwellings received little discussion in this case. Addressing this issue, CMP asserts that its design of the project route also reflects its diligent efforts to avoid impacts on inhabited dwellings. Foremost, CMP sited approximately 73% of the NECEC within existing transmission corridor owned by CMP. Where the Company was unable to site the project within existing corridor, CMP conducted due diligence on necessary real estate purchases and sited the project within newly acquired corridor nearby few, if any, inhabited dwellings. Following this approach, the NECEC route runs almost exclusively on privately-owned, commercial forestland containing few, if any, nearby inhabited dwellings. During the discovery phase of this proceeding, CMP provided written responses to data requests on this issue in at least two instances. Other parties neither offered these data responses as record evidence nor presented any testimony on this subject. CMP Initial Br. at 128-129.

No party in this case offered testimony on this issue and the issue was not directly addressed by any of the people who testified during the three public witness hearings in this case. Based on the limited record in this case on this issue, the Commission finds that CMP has designed the Project in a way that results in sufficient distance between the proposed transmission line and inhabited dwellings.

F. State Renewable Energy Goals

1. Incremental Hydroelectric Generation and GHG Emissions

As discussed in Section IV(D) above, the Commission finds that incremental hydroelectric generation for delivery into New England promotes the State’s renewable energy generation goals. At issue, then, is whether the NECEC will result in incremental hydroelectric generation and, thus, advance the State’s renewable energy

³² As required by section 3132(2-C)(A), CMP included a discussion of the proposed transmission line’s proximity to inhabited dwellings in its September 27, 2017 Petition. CMP Petition, Vol. 1, at 69-70.

generation goals, including GHG emissions reductions.³³ As discussed below, this issue involves consideration of: (1) whether there would be excess water within the HQ system that could be used to generate energy as a result of the NECEC export path; (2) whether it is reasonably likely that HQ will develop additional hydroelectric capacity on its system, at least to some significant degree, as a result of the NECEC; and (3) if HQ did divert energy from another market to meet its NECEC obligations, as has been argued by some parties, what type of supply would that other market use to replace the diverted HQ energy.

a. Positions of the Parties

CMP and IECG argue that HQ Production currently has excess energy available to supply the NECEC without diverting energy from other markets. CMP Initial Br. at 98-110; IECG Initial Br. at 35-38. In support of this, these parties cite to publicly available information, as well as to a letter in which Hydro-Québec states that it spilled over 4.5 TWh worth of energy in 2017 and 10.4 TWh worth of energy in 2018 due to lack of economic transmission, and that without additional transmission export capability, the quantity of spilled water in future years is expected to be comparable. CMP Initial Br. at 108-109; Kelly-004-001. CMP and IECG note, further, that the PPAs between HQUS and the MA EDCs are firm contracts that impose significant financial consequences for failure to perform to provide incremental energy. CMP Initial Br. at 138-150. CMP also argues that the NECEC will contribute to HQ Production's economic incentives to develop new hydroelectric facilities. *Id.*

Moreover, CMP states that all three analyses conducted in this case regarding the NECEC's GHG reduction benefits show that the Project's operation would result substantial GHG reductions for Maine. CMP Initial Br. at 102-104. Specifically, CMP refers to the Energyzt analysis³⁴ that found that the NECEC would reduce Maine GHG emissions levels by approximately 255,000 metric tons per year, the Daymark analysis that found that the NECEC would result in reductions of 264,000 metric tons per year, and the LEI analysis that found that the NECEC would reduce Maine's GHG emissions levels by approximately 306,000 metric tons per year. On a regional level, these amounts are equivalent to GHG emissions reductions of between 3.0 and 3.6 million metric tons per year. According to LEI, such reductions are equivalent to removing approximately 700,000 passenger vehicles from the road. LEI Report at 30.

³³ Regarding the issue of potential increases in CO₂ emissions from the HQ facilities, as noted in the LEI Report, on a lifecycle basis, any such increases would be substantially lower than emissions by natural gas generation. LEI Report at 30.

³⁴ The Energyzt analysis also concluded that the NECEC would result in increases in GHG emissions in other regions (New York, PJM, Ontario) and may actually increase overall emissions. Speyer Dir. Test., Exh. JMS-4, Technical Report: New England Clean Energy Connect (NECEC) Regional Carbon Emissions Impacts at 3 (Apr. 2018).

GINT, NextEra, NRCM, and Ms. Kelly argue that the NECEC would not have any meaningful GHG reductions benefits, and, in fact, would increase GHG emissions because HQ Production would divert energy from other regions to serve its obligations under the NECEC. GINT Initial Br. at 71-73; NextEra Initial Br. at 15-19; NRCM Initial Br. at 14-16; Kelly Initial Br. at 9-11. GINT and NextEra support this position by asserting that the PPAs with the MA EDCs do not actually require HQ Production to fulfil its obligations with incremental hydroelectric generation GINT argues that HQ Production spilled water for reasons other than those stated by Hydro-Québec, arguing that Hydro-Québec has more than enough physical transmission available to export that energy to market. GINT Initial Br. at 70-73. GINT asserts, based on the testimony of Ms. Bodell and Mr. Fowler,³⁵ that because Hydro-Québec did not do so, that there were other non-transmission constraints that led to the spillage (e.g., reservoir management, multi-year smoothing, opportunity cost). *Id.*

b. Discussion

The Commission concludes that the NECEC will result in significant incremental hydroelectric generation from existing and new resources in Québec and, therefore, will result in reductions in overall GHG emissions through corresponding reductions of fossil fuel generation (primarily natural gas) in the region. In making this decision, the Commission recognizes the inherent uncertainty in determining how HQ Production will develop and operate hydroelectric facilities over the next 20 years and beyond; thus, the levels of incremental hydroelectric generation and GHG reductions resulting from the NECEC cannot be precisely determined.³⁶

In support of this conclusion, the Commission observes the representations made by Hydro-Québec in Kelly-004-001 that it was a lack of transmission that resulted in the spilling of a substantial amount TWh in 2017 and 2018 (4.5 TWh worth of energy in 2017 and 10.4 TWh worth of energy in 2018). Hydro-Québec represented, further, that, “without additional transmission export capability,” a comparable amount of water will be spilled in future years. *Id.* This conclusion is supported by both the Daymark and LEI analyses, as well as through LEI’s testimony stating that HQ Production has surplus capacity and the NECEC will provide a means to sell that surplus capacity into New England. CMP Exh. NECEC-5 at 4; LEI Report at 12; Hearing Tr. at 127-128 (October 19, 2018). The Daymark and LEI testimony, thus, corroborate the Hydro-Québec statements in this regard.

³⁵ Corrected Fowler and Bodell Supp. Test. at 53-54.

³⁶ Hydro-Québec did not seek to intervene or participate in this proceeding. The Commission notes that such participation would have been helpful in understanding its prior and near-term operations. However, the operations over 20- to 40-year period would have remained uncertain to a large degree.

Furthermore, HQ Production, as a rational economic actor, will seek to maximize profits, and therefore will use whatever water it has available to generate energy for the NECEC rather than using the NECEC to divert energy from existing markets into New England. In addition, the Commission agrees with CMP that HQ Production has systematically increased capacity and storage capability over time in response to market signals for more clean energy. Dickinson, Stinneford, and Escudero Reb. Test. at 30-35 and Figures 4 and 5; CMP Initial Br. at 107. Thus, the Commission finds that the generation imported into New England over the NECEC is likely to be incremental at least to a large degree, and not, in any significant way, be simply diverted from other markets.³⁷

With respect to Ms. Bodell's analysis that concluded that HQ Production's spillage was due to factors other than transmission availability, the Commission notes that it was based on one-year (2017) of data and did not account for numerous material factors regarding the actual available transmission capacity and market conditions that actually determine whether it would be economic for HQ Production to sell available additional energy into New England or some other export market. Hearing Tr. at 55-83 (Jan. 8, 2019).

Further, the Commission notes that, because the PPAs between HQUS and the MA EDCs are firm contracts, that, except for a *force majeure* or transmission outage, HQUS is required to sell and deliver the specified amounts of energy. If it fails to do so, it will incur significant financial consequences for failure to perform. The PPAs do not permit HQUS to choose non-performance for economic reasons (*i.e.*, to sell available energy into an adjoining spot market in one or more hours in which the spot price in the market exceeds the PPA price for the Products) and to then cure the resulting delivery shortfall at a later time. Moreover, a willful breach of the PPAs would subject HQUS to substantial termination payments being owed to both the MA EDCs and CMP, and would also result in substantial reputational damage to HQUS, and its parent Hydro-Québec, that would hinder future business relationships with current and prospective purchasers of hydropower generation in the region.

Therefore, because the Commission finds that the NECEC will result in incremental hydroelectric generation, it follows that the Project will also provide GHG emissions reduction benefits in the region. As noted above, the expert analyses provided in the record in this proceeding indicates that the GHG emission reductions in the region resulting from the NECEC would be in the range of approximately 3.0 to 3.6 million metric tons per year, which as noted above, is equivalent to removing approximately 700,000 passenger vehicles from the road.

2. Renewable Generation Development in Maine

³⁷ The Commission notes that, even if significant power were to be diverted from New York, that State's renewable energy power policies goals would likely limit to a large degree replacement of the power with fossil fuels. CLF-002-003.

a. Positions of the Parties

NextEra, RENEW, and NRCM argue that the NECEC will prevent the development of renewable energy generation in western Maine. NextEra Initial Br. at 16-19; RENEW Initial Br. at 4-6; NRCM Initial Br. at 8-9. Specifically, these parties argue that, in the event that CMP constructs the Surowiec-South interface upgrades as required, and the NECEC proceeds, the Project will “use up” the existing “headroom” at that interface to the detriment of future Maine-based renewable projects. For this reason, RENEW suggests that the Commission condition issuance of a CPCN for the NECEC on limiting the amount of import capacity that it can seek to qualify in the FCM so as not to disadvantage Maine-based renewable generation development. RENEW Initial Br. at 2-6.

NextEra argues that if the NECEC was constructed as an AC transmission facility rather than a DC facility, the NECEC would be congruent with Maine’s renewable energy generation goals. NextEra Initial Br. at 34-38. NextEra also argues that, if the NECEC were an AC facility, Maine-based solar and wind projects could use the line by buying transmission rights from HQUS for the 110 MWs of unused transmission in years 1-40 and 1,090 MWs of unused transmission in years 21-40. *Id.*

CMP argues that that the NECEC will have no impact on renewable generation ahead of it in the interconnection queue and that there is no record evidence to support the claims that the NECEC will impede the development of renewable generation projects that are behind it in the interconnection queue. CMP Initial Br. at 116-122; CMP Reply Br. at 47-54. CMP states, that in fact, the NECEC’s transmission system upgrades will likely render it cheaper for renewable generation in western and northern Maine to interconnect to the regional transmission grid, which is an additional benefit to generation developers. *Id.* In response to NextEra’s argument that a significant portion of the NECEC should be HVAC transmission, CMP states that the use of additional HVAC transmission would result in: (1) the use of larger, unsightly transmission structures; (2) a more expensive project; and (3) higher transmission losses. CMP Reply Br. at 57-59.

b. Discussion

In Section V(A) above, the Commission discusses the impact of the NECEC on existing Maine generators, as well as on the development of new generation facilities in Maine. In that section, the Commission finds little merit to the concerns that the NECEC would frustrate Maine-based renewable energy development by absorbing “headroom” on the transmission system. Accordingly, the Commission concludes that NECEC will not hinder Maine in making progress towards meeting its statutory renewable portfolio requirements and the goals under the Maine Wind Energy Act and Maine Solar Energy Act.

The Commission agrees with CMP that the NECEC will have no impact on any proposed renewable generation projects in Maine with a better interconnection queue

position. As noted above, there are currently more than 750 MW of renewable capacity in Maine ahead of the NECEC in the queue. For projects that are behind NECEC in the queue or are not yet in the queue, whether these projects move forward depends on numerous factors, including the results of ISO-NE's planning studies, the economic viability of each project, and the availability of PPAs that may be necessary for the financing of such projects.

The Commission notes that the NECEC could facilitate renewable generation in Maine in that it will provide for additional transfer capacity at no cost to future generation developers if, as argued by several parties, the NECEC does not qualify in the FCM, or qualifies less than 1,200 MW.

In addition, as described in Section II(C) above, the NECEC requires construction of several reinforcements to the transmission system south of Larrabee Road, including a parallel 345 kV line between the Coopers Mills Road Substation and the Maine Yankee Substation. The ISO-NE has identified certain of these upgrades, including the new Coopers Mills line, as necessary to the interconnection of new renewable generation in western and northern Maine.³⁸ Because the costs of these reinforcements will be borne by the NECEC, future renewable generation projects may benefit from the fact that they already exist at the time their projects seek to interconnect.

For these reasons, the Commission rejects RENEW's suggestion that the Commission limit the amount of NECEC-enabled capacity for participation in the capacity market and "reserve" that amount for certain generation types or projects. Such a condition would not be in the public interest and would be contrary to the first-come, first-served design of the ISO-NE interconnection queue and study process.³⁹

VI. REVIEW AND DISCUSSION OF STIPULATION

A. Stipulation Provisions

The major provisions of the Stipulation include the issuance of a CPCN for the NECEC and a set of "CPCN Conditions" that contains benefit provisions in various categories. Specifically, certain CPCN Condition provisions provide ratepayer protections against costs and financial risks associated with the Project or are intended

³⁸ CMP-010-006, Attachment 1 (2016/2017 Maine Resource Integration Study) at 3 (identifying a "second 345 kV Coopers Mills – Maine Yankee 302 line" as a shared requirement for interconnection of both the northern and western Maine clusters).

³⁹ CMP argues that a condition that an amount of NECEC-enabled capacity eligible for participation in the capacity market be "reserved" for other generation projects is preempted by federal law in that the Federal Power Act vests in FERC "exclusive jurisdiction over wholesale sales of electricity in the interstate market." Because the Commission finds that such a condition would not be in the public interest, it need not address the preemption issue.

to reimburse ratepayers for prior costs associated with the Project and to compensate ratepayers for the benefits provided to the Project. Additionally, certain provisions provide a series of public benefits through funding of various initiatives and commitments. The Stipulation also includes various additional commitments by the Project sponsors. Each of the CPCN Condition provisions is described below.

1. Ratepayer Protections and Compensation

a. NECEC Project Ownership

The Stipulation includes a condition that CMP will convey the Project to NECEC Transmission LLC (NECEC LLC), a newly-organized subsidiary within the Avangrid Networks that is not a subsidiary of CMP. Stip. Sec. V.B.1. Upon the transfer, CMP and NECEC LLC will enter into a Service Agreement which contains the provisions under which CMP will provide various services to NECEC LLC, including accounting, legal, information technology, other corporate support, supply chain and engineering services. Stip. Sec. V.B.1.c. In addition to the transfer of the Project, the Stipulation provides for the following:

- The transfer of the Project from CMP to NECEC LLC will occur prior to the start of construction;
- NECEC LLC will not participate in any money pooling arrangements, credit facilities or other financing agreements with CMP without Commission consent;
- NECEC LLC and CMP will remove NECEC-related development expenses from CMP's books;
- NECEC LLC will put in place a guaranty by AVANGRID, Inc. of its payment obligations to CMP and with respect to the Heat Pump Fund, the Dirigo EV Fund, the Franklin County Host Community Benefits Fund and the Education Grant Funding. In addition, NECEC LLC will grant a first priority security interest to CMP in NECEC LLC's payment rights from HQUS or Hydro-Québec with respect to the Low-Income Customer Benefits Fund and the Rate Relief Fund;
- NECEC LLC and CMP will facilitate access to the NECEC transmission corridor for ATV, snowmobile, and other recreational uses;
- NECEC LLC will not use CMP's brand name, reputation or customer relations and will not engage in joint marketing or advertising with CMP;
- Maine transmission and distribution customers shall not be responsible for any portion of the revenue requirement for the Project during at least the first 40 years of its useful life;

- CMP and NECEC LLC will not take or support any action to change the NECEC cost recovery mechanism that would result in Maine customers being responsible for any portion of NECEC LLC's revenue requirement during the first 40 years of the Project without Commission approval; and
- Provided, however, that these provisions would not prohibit Maine customers from paying for a portion of the Project through the purchase of electricity provided through the 110 MW not contracted by the Massachusetts EDCs.

Stip. Sec. V.B.1.d.

b. Consideration Payment

As consideration for the transfer of the Project assets and any goodwill of CMP related to the Project, NECEC LLC will pay CMP \$60 million, payable in 40 installments of \$1.5 million annually. CMP will direct these payments to the NECEC Rate Relief Fund described below. Stip. Sec. V.B.1.b.

c. Transmission Rates Customer Credit

Effective with the 2019 transmission rate change, CMP will provide a one-time credit for RNS and LNS transmission customers of \$1.005 million. This credit represents the amounts paid in rates by transmission customers for those portions of the transmission corridor held by CMP that have been included in FERC Account 105 for Plant Held for Future Use. CMP will remove all NECEC-related property from FERC Account 105 upon issuance of the CPCN. Stip. Sec. V.B.2.

d. New Corridor Removed from Transmission Rates

Upon issuance of the CPCN, CMP will remove the unused portion of the transmission corridor from the Canadian border to the existing Section 222 from Account 105 and classify it as Non-Operating Property in FERC Account 121. CMP agrees that it will not reclassify this unused corridor or seek recovery in any other way unless the transmission project that will use this corridor is otherwise eligible for rate recovery from Maine retail customers pursuant to a FERC-approved transmission tariff. Stip. Sec. V.B.3.

2. Public and Ratepayer Benefits

a. Low-Income Customer Benefits Fund

Beginning with the NECEC commercial operations date (COD), NECEC LLC will fund a \$40 million Low-Income Customer Benefits Fund by making 40 annual payments of \$1.25 million. This fund will be available to fund programs that benefit low-income energy customers in Maine and may be used to reduce the amounts paid by low-income customers for electricity or other sources of energy, for weatherization and household efficiency programs. The specific use of these funds will be as designated by the OPA in consultation with the Efficiency Maine Trust (EMT) and a designee of the

Governor. In designating the use of these funds, a preference for customers located in the NECEC Host Communities may be applied. Stip. Sec. V.B.4.

b. Rate Relief Fund

Effective with the NECEC COD, a \$140 million Rate Relief Fund will be established to provide per kilowatt hour rate relief for CMP's retail customers. As noted, CMP will direct the annual \$1.5 million consideration payment received from NECEC LLC to this fund. NECEC LLC will provide an additional \$2 million annual payment. The Rate Relief Fund will be funded over 40 years and will flow to ratepayers through stranded costs or comparable per kilowatt hour mechanism. In addition, to the extent that CMP is able to monetize the Environmental Attributes discussed in Section VI.A.3.d, those funds will also be contributed to the Rate Relief Fund. Stip. Sec. V.B.5.

c. Broadband Benefits

As part of the final design, CMP and NECEC LLC will include facilities and equipment necessary to provide additional fiber optic capacity on the transmission line with an estimated value of \$5 million. In addition, beginning with COD, a \$10 million Broadband Fund will be established and funded by five annual contributions of \$2 million by HQUS. This fund may be used for grants to study and implement expanded availability of high speed broadband in the host communities. Stip. Sec. V.B.6.

d. Heat Pump Benefits

Beginning with COD, a \$15 million Heat Pump Fund will be established and funded by annual contributions over 8 years of \$10 million by HQUS and \$5 million by NECEC LLC. This fund will be used for the installation of heat pumps or other efficient heating technologies as agreed to by the OPA, the Governor's designee(s), CLF, Acadia Center, and IECG in consultation with EMT. Stip. Sec. V.B.7.

e. Electric Vehicle (EV) Funds

The Stipulation provides for two EV funds. The \$5 million Dirigo EV Fund, to be funded either by a lump sum contribution or over time by NECEC LLC beginning in the year NECEC LLC and Hydro-Québec receive all necessary permits. This Fund will provide consumer rebates for the purchase of qualifying EVs by Maine residents and rebates to defray the cost of workplace and other public vehicle charging installations and be managed pursuant to an agreement among CLF, Acadia Center, and the Governor's designee. Stip. Sec. V.B.8.a.

The \$10 million Hydro-Québec EV Fund will be funded through five payments of \$2 million annually from HQUS beginning on COD. This Fund will be used to fund the deployment of a state-wide fast and ultra-fast public charging infrastructure network for EVs in Maine. In addition, Hydro-Québec commits to share its expertise with respect to EV infrastructure in developing the programs funded by the Hydro-Québec EV Fund. Stip. Sec. V.B.8.b.

f. Franklin County Host Community Benefits

Beginning with COD, a \$5 million fund for the benefit of communities in Franklin County will be established and funded by ten annual contributions of \$500,000 by NECEC LLC. This fund will be used to support the economic and community development efforts of the Greater Franklin Development Council. Stip. Sec. V.B.9.

g. Education Grant Funding

NECEC LLC will provide a total of \$6 million for education-related grants and programs. NECEC LLC will contribute \$1 million to the University of Maine for research and development associated with the commercialization of marine wind generation technology once all State of Maine permits and approvals are received. Stip. Sec. V.B.10.a. Beginning with COD, NECEC LLC will make 10 annual contributions of \$500,000 each to fund programs and scholarships for needy Maine students to attend the University of Maine at Farmington and vocational and training programs and scholarships in the math, science and technology fields in Franklin and Somerset Counties. Stip. Sec. V.B.10.b.

3. Other Commitments

Finally, the Stipulation contains the following additional commitments on the part of CMP and NECEC LLC.

a. Mitigating Impacts on Transmission System

In the Stipulation, CMP and NECEC LLC agree to a number of initiatives intended to mitigate the impacts of the NECEC on the transmission system and existing and future energy resources in Maine. Stip. Sec. V.B.11. These provisions are conditioned on the NECEC receiving a CPCN and all other necessary approvals and include commitments by CMP and NECEC to:

- Participate in all ISO-NE studies to determine the thermal, voltage and stability ratings for the Surowiec-South interface and advocating to maximize its stability rating and the total transfer capacity;
- Engage a consultant at CMP's expense, not to exceed \$2 million, to evaluate non-wires solutions that would reduce congestion at the Maine/New Hampshire and Surowiec-South interfaces;
- For any cost-effective and commercially viable non-wires solution identified, assess and pursue approval and cost allocation pursuant to the ISO-NE Tariff and to propose such solutions in applicable competitive solicitations; and
- Within one year of COD, create and make available an annual electric transmission and distribution system report which analyzes system needs that may potentially be met by non-wires alternatives.

Id.

b. Regional Carbonization

Conditioned upon the NECEC receiving a CPCN and all other necessary approvals, CMP and NECEC LLC will participate in a regional decarbonization

collaborative comprised of CLF, Acadia Center, utilities, the Governor's designee, OPA, IECG, and other stakeholders to study ways by which the Northeast Region may achieve economy-wide decarbonization of zero emissions by 2050. CMP will provide 50% of the cost of the study, not to exceed \$500,000. Stip. Sec. V.B.12.

c. Securitization

Upon COD, NECEC LLC will provide \$1 million to pay for any investment bank, investment advisor or consultant and/or legal fees incurred by OPA, the Governor's designee, IECG, and CMP related to the securitization of the annual payments to the Low-Income Customer Benefits Fund and the Rate Relief Fund. Any funds not used for this purpose will be disbursed to the Rate Relief Fund. Stip. Sec. V.B.13.

d. HQ Support Agreement

Prior to the start of construction, CMP, NECEC LLC, and HQUS will enter into a support agreement reflecting HQUS's funding commitments for the Broadband Fund, Heat Pump Fund, Hydro-Québec EV Fund, HQUS's commitment to pay NECEC LLC \$3.5 million annually and HQUS's commitment to provide CMP 400,000 MWh annually of Environmental Attributes related to deliveries of hydroelectric power to New England. CMP will seek to monetize the Environmental Attributes and any proceeds, net of costs to CMP, will be directed to the Rate Relief Fund.

The HQ Support Agreement will also reflect Hydro-Québec's commitment to share EV infrastructure expertise and to include sufficient fiber optic capacity in the Québec transmission facilities to provide a fiber optic connection between Maine and Montreal. Finally, the Support Agreement will reflect the guaranty from Hydro-Québec of HQUS's payment obligations. Stip. Sec. V.B.14.

e. Maine Worker Preferences

NECEC LLC, and its contractors working on the construction of the NECEC will give preference to hiring Maine workers. Stip. Sec. V.B.15.

B. Stipulation Review and Approval Requirements

Chapter 110 of the Commission's Rules specifies that, in deciding whether to approve a stipulation, the Commission will consider the following criteria:

- a. Whether the parties joining the stipulation represent a sufficiently broad spectrum of interests that the Commission can be sure that there is no appearance or reality of disenfranchisement;
- b. Whether the process that led to the stipulation was fair to all parties;
- c. Whether the stipulated result is reasonable and is not contrary to legislative mandate; and
- d. Whether the overall stipulated result is in the public interest.

Ch. 110, Sec. 8(D)(7). These review requirements are discussed below.

C. Do the Parties to the Stipulation Represent a Sufficiently Broad Spectrum of Interests?

1. Background

There are 30 parties in this case. Of these 30 parties, the following 11 parties were signatories to the Stipulation: CMP; OPA; GEO; IECG; CLF; Acadia Center; WM&RC; Lewiston; the Chamber; IBEW; and FMM (Stipulating Parties). The following 11 parties expressed opposition to the Stipulation in either written comments or oral comments made during the hearing on the Stipulation that was held on March 7, 2019: NextEra; Ms. Kelly; GINT; NRCM; RENEW; MREA; ReEnergy; Caratunk; Former Senator Thomas Saviello; Old Canada Road; and the Town of Wilton. On March 28, 2019, the Town of Farmington filed a letter stating its formal opposition to the NECEC.⁴⁰ This letter did not specify the Town of Farmington's position regarding the Stipulation. The remaining seven parties have expressed no formal position regarding the Stipulation: GFDC⁴¹; Trout Unlimited; Darryl Wood; Town of Alna; Town of New Sharon; Town of Jackman; and Franklin County Commissioner Terry Brann.

2. Positions of the Parties

a. Signatories to the Stipulation

The signatories to the Stipulation argue that they represent a sufficiently broad spectrum of interests to ensure that there is no appearance or reality of disenfranchisement. After identifying the "interest" represented by each of the signatories, CMP argues "[t]he Stipulating Parties' varied obligations, missions, and constituencies all demonstrate that the Stipulation has the support of a diverse group of stakeholders, and that the signing parties do not 'represent only a narrow interest.'" Cover Letter to Stipulation, February 21, 2019, at 3-5.

⁴⁰ The Town of Farmington's letter is dated March 26, 2019.

⁴¹ On February 22, 2019, GFDC filed a letter in which it "endorse[d] the project," expressed "disappointment that CMP is not doing more to benefit Franklin County from a broadband expansion perspective," noted its unsuccessful efforts to get CMP to support the "Franklin County Broadband Initiative's efforts," and urged the Commission to "modify the Settlement Agreement to better utilize the value of CMP's commitment, to provide greater incentives for additional private investment to expand the availability of broadband. Implementing our recommendation will have a much greater impact to the expansion of broadband than the current plan incorporated into the Settlement Agreement." However, the Greater Franklin Development Council took no formal position on the merits of the Stipulation. Letter dated Feb. 19, 2019 and filed on Feb. 22, 2019 at 1-2.

Citing *Central Maine Power Company and Public Service of New Hampshire, Request for Certificate of Public Convenience and Necessity for the Maine Power Reliability Program Consisting of the Construction of Approximately 350 Miles of 345 kV and 115 kV Transmission Lines (“MPRP”)*, Docket No. 2008-00255, Order Approving Stipulation at 20 (June 10, 2010), (*MPRP Order*) CMP states:

[T]he Stipulation satisfies the “primary purpose” of the sufficiently broad spectrum of interests standard in Chapter 110, as articulated in Docket No. 2008-00255, particularly:

[T]o ensure that the Commission does not approve stipulations where the signing parties represent only a narrow interest. The criterion is not intended to require, and does not mean, that all parties participating in a case must sign a stipulation for the Commission to approve it.

Id. at 5.

CMP argues that in the *MPRP Order*, the Commission found that “a stipulation entered into by 19 of more than 100 parties to a CPCN proceeding, including the petitioning utility, ‘the OPA, representatives of the environmental community, representatives of the business and construction communities, the City of Lewiston, and an abutter’ satisfied the ‘first criterion for approval of a stipulation.’” *Id.* at 5, fn. 12.

The IECG and OPA filed joint comments regarding the Stipulation. Citing *Public Utilities Commission, Investigation into Verizon Maine’s Alternative Form of Regulation*, Docket No. 2005-155, Order Approving Stipulation, Docket No. 2005-155 (Oct. 3, 2007) (*Verizon AFOR Order*), IECG and the OPA assert that the Commission found that the participation in the stipulation by the OPA was sufficient to address the interest of all consumers in Maine in a manner to satisfy this prong of the Commission’s test. IECG and OPA Comments at 12 (Mar. 1, 2019).

The IECG and OPA further argue the failure of certain interests to join a stipulation does not mean that the stipulating parties have failed the “broad spectrum of interests” requirement in Section 8(D)(7)(a). The IECG and OPA cite the *MPRP Order* as support for their position on this point. *Id.* at 12-13.

In its written comments on the Stipulation, IBEW states that it supports the IECG’s comments regarding the sufficiency of breadth of interests joining the Stipulation. IBEW comments at 1 (Mar. 1, 2019). In their comments, the Chamber, the City of Lewiston, CLF, Acadia Center, the GEO, and FMM agree that the joining parties reflect a sufficiently broad spectrum of interests to meet the first evaluation criterion of Section 8(D)(7). Chamber and Lewiston Comments at 2 (Mar. 1, 2019); CLF and Acadia Center Comments at 4 (Mar. 1, 2019); GEO Comments at 1-2 (Mar. 1, 2019); FMM Comments at 1 (Feb. 28, 2019).

b. Parties that Did Not Sign the Stipulation

NRCM asserts that the parties joining the Stipulation do not represent a sufficiently broad spectrum of interests. NRCM Comments at 1 (Mar. 1, 2019). NRCM notes that approximately two-thirds of the parties in this case did not sign the Stipulation. *Id.* at 2. NRCM argues that notwithstanding CMP's claim that the parties to the contested stipulation represent a broad spectrum of interests, the limited number of stipulating parties represents only a relatively narrow list of interests. *Id.* at 3.

NextEra argues that the Stipulation fails to represent a sufficiently broad spectrum of interests and should be denied because it does not represent the relevant interests of Maine generators. NextEra Comments at 3 (Mar. 1, 2019). NextEra attempts to distinguish this Stipulation from the stipulation approved by the Commission in the *MPRP Order*, noting differences between the two in terms of both support for and participation by generators. *Id.*

Noting that more parties oppose the Stipulation than support it, GINT argues that the signatories do not represent a sufficiently broad spectrum of interests. GINT Comments at 9 (Mar. 1, 2019). GINT asserts that generators are not represented by the settling parties and that environmental groups and the affected towns are divided in their support of the Stipulation. *Id.*

Caratunk defines "public" to include the rural people located along the proposed corridor who will be "directly harmed by the NECEC" and asserts that this broader public is not represented in this Stipulation and has been "disenfranchised." Caratunk Comments at 2 (Mar. 1, 2019). Caratunk argues that the affected people of Somerset County are not being adequately compensated for the harm that the NECEC would cause them. *Id.* at 2. Caratunk also argues that the Stipulation does not address the interests of Maine's existing generators and would suppress the future location of renewable energy projects in Maine. *Id.* at 4.

Ms. Kelly argues a different standard, *i.e.*, that the breadth of interests in the joining parties to the Stipulation reflects "an appearance and reality of disenfranchisement." Kelly Comments at 4 (Mar. 1, 2019).

ReEnergy argues that a sufficiently broad spectrum of signatories requires a majority of the parties in a case to join a stipulation. ReEnergy Comments at 2 (Mar. 1, 2019). ReEnergy asserts that here, only one third of the parties are signatories to the Stipulation. *Id.* ReEnergy further asserts that the fact that no independent power generator has joined the Stipulation indicates a lack of diversity in the Stipulating Parties. *Id.*

Old Canada Road states that the stipulating parties lack inclusion of those who will be most affected by the construction and presence of the powerline. Old Canada Road Comments at 1 (Mar. 1, 2019).

RENEW and MREA filed joint comments in opposition to the Stipulation. However, those comments did not specifically address the issue of whether the stipulating parties represent a sufficiently broad spectrum of interests.

3. Discussion

The Stipulation presented to the Commission in this case is signed by 11 of 30 parties and is opposed by an equal number of active parties. As summarized above, several parties argue that any stipulation signed by a smaller percentage of parties, and opposed by a larger percentage, must fail to satisfy the “sufficiently broad spectrum of interests” criterion of the four Section 8(D)(7) stipulation approval criteria.

In the *MPRP Order*, the Commission stated:

In the case before us, the Stipulation was entered into by 19 parties, including all of the utilities involved in the project, the OPA, GridSolar, the IECG, representatives of the environmental community, representatives of the business and construction communities, the City of Lewiston, and an abutter. We find that these signatories represent a broad spectrum of interests and that there is no disenfranchisement or appearance of disenfranchisement.... We thus conclude, that the first criterion for approval of a stipulation has been satisfied here.

MPRP Order at 20.

In case before us, the Stipulation is signed by parties that represent a comparably diverse and broad spectrum of interests. Here, the signing parties include the utility seeking the CPCN; OPA, that is charged with representing the interests of Maine’s ratepayers; IECG, that represents the interests of large industrial customers; CLF and Acadia Center, that are representatives of the environmental community; the Chamber, that represents both large and small businesses; Lewiston; and the IBEW, that represents the interests of electrical workers.

In addition to the broad group of interests represented by the above-listed signatories, the GEO also joined the Stipulation. Furthermore, the Governor’s Office played a significant role in the negotiation of the Stipulation. IECG and OPA Comments at 12 (Mar. 31, 2019). The Governor is the only elected state official representative of all Maine citizens. The Governor’s participation in the negotiations, and her endorsement of the results of those negotiations through the GEO signing the Stipulation, enhance the breadth of the spectrum of interests joining the Stipulation. *Verizon AFOR Order* at 7.

Because of the diverse interests represented by the signatories, the Commission finds that the parties joining the Stipulation represent a sufficiently broad spectrum of interests to ensure that there was no appearance or reality of disenfranchisement. The Commission therefore concludes that the Stipulation satisfies the first criterion for approval of a stipulation.

D. Fairness of the Process to All Parties

1. Positions of the Parties

a. Signatories to the Stipulation

In the cover letter to the Stipulation, CMP asserts that the process that gave rise to the Stipulation was “fair, open and transparent” and that the provisions of the Stipulation are “based on extensive information presented in this proceeding and gathered through exhaustive discovery and discussions among CMP and the intervening parties, including the Stipulating Parties and Staff.” Stip. Cover Letter at 5. CMP further states:

During the case, CMP and interested intervenors participated in bilateral settlement discussions from time to time. In addition, Staff, CMP, and many of the intervenors participated in formal settlement conferences on September 7 and 14, 2018, and February 5 and 12, 2019. Staff provided advance notice of all such settlement conferences by procedural order or email notifications sent to all parties on the service list. None of the participating parties objected to Staff’s participation in such settlement conferences.

All Intervenors had the opportunity to participate in the settlement conferences and there is no appearance or reality of disenfranchisement. All of the settlement conferences were publicly noticed in advance and the parties were given a reasonable opportunity to participate. Additionally, those intervenors who were active in the proceeding and who now oppose the Stipulation attended and participated in the settlement conferences (e.g., Ms. Kelly, NRCM, the Generator Intervenors, and NextEra).

Id. at 6.

Citing the *Verizon AFOR Order*, IECG and OPA assert that Chapter 110 does not require that every party participate in every settlement discussion and that it is “reasonable not to include all individual parties in certain settlement discussions, for instance parties whose views are clear and the other parties did not plan to incorporate such views in their agreement.” IECG and OPA Comments at 10 (Mar. 1. 2019). The IECG and OPA further argue that the Commission affirmed these findings in the *MPPRP Order*. *Id.* at 10-11.

The IECG and OPA argue that, in evaluating the fairness of the process, the Commission must look at the entire process as a whole. The IECG and OPA note that, in this case, the Stipulation was filed after the briefing and hearing stages of the proceeding and after the case had been fully developed. *Id.* at 11. The IECG and OPA further note that in this case, all parties were given an opportunity to (1) participate in settlement conferences prior to the filing of the Stipulation, (2) file written comments on

the Stipulation, and (3) make oral argument during a hearing that was held on the Stipulation. *Id.*

Finally, the IECG and OPA note the similarity between the process that produced this stipulation and the processes in the *Verizon AFOR* and *MPRP* cases, concluding that under Commission precedent the process leading to this Stipulation was fair. *Id.* at 18.

In its written comments on the Stipulation, IBEW states that it supports the IECG's comments regarding the fairness of the process that led to the Stipulation. IBEW Comments at 1 (Mar. 1, 2019). In their jointly-filed comments, the Chamber and Lewiston also state their support for the IECG's comments regarding the second evaluation criterion of Section 8(D)(7). Chamber and Lewiston Comments at 2 (Mar. 1, 2019).

In their joint comments, CLF and Acadia Center describe the Stipulation process as fair, open, and transparent. CLF and Acadia Center Comments at 4 (Mar. 1, 2019).

To support its position that the process that produced the Stipulation was fair, the GEO notes the fact that there were four formal settlement conferences that were noticed in advance by the Hearing Examiner in the proceeding. GEO Comments at 2 (Mar. 1, 2019).

FMM asserts that when considering the fairness of the stipulation process, the Commission should look at the process for the entire case and notes that that process has been "exhaustive." FMM comments at 1 (Mar. 1, 2019). Furthermore, FMM notes that any party could have participated in the stipulation discussions, and that many did. *Id.*

b. Parties that Did Not Sign the Stipulation

NRCM argues that the process that produced the Stipulation was not fair to all parties in this case. NRCM Comments at 3 (Mar. 1, 2019). NRCM argues that, notwithstanding the formal settlement conferences convened by the Commission Staff, the Stipulation was largely "fixed" when NRCM and other parties were first provided the settlement terms in February. NRCM supports that provision by noting that the stipulation changed very little after that point. *Id.*

GINT argues that the process that produced the Stipulation was not fair to all parties. GINT Comments at 9 (Mar. 1, 2019). GINT notes that it would not be fair to them nor to other intervenors, who invested substantial funds and effort in the proceeding to have their factual issues resolved by a stipulation to which they did not agree. *Id.*

Caratunk asserts that the process that produced the Stipulation was not fair. Caratunk argues that the process should have incorporated some of the valid concerns

of the parties and addressed some of the issues brought up in the hearings and briefs. Caratunk Comments at 4 (Mar. 1, 2019). In support of its assertion that the Stipulation process was not fair, Caratunk notes that CMP failed to sufficiently analyze critical issues and failed to explore reasonable amendments to its proposed Project. *Id.* at 4-5. Caratunk also asserts that CMP's failure to include Caratunk in the Stipulation negotiations is similar to CMP's failure to include Caratunk and other key stakeholders in CMP's outreach efforts regarding the Project and its discussion with WM&RC about the MOU. *Id.* at 3.

Ms. Kelly and Old Canada Road agree with these parties that the process that led to the Stipulation was not fair. Kelly Comments at 5-4 (Mar. 1, 2019); Old Canada Road Comments at 1 (Mar. 1, 2019).

Finally, ReEnergy and NextEra noted that they took no position on the fairness of the process, and RENEW and MREA did not address the issue. ReEnergy Comments at 2 (Mar. 1, 2019); NextEra Comments at 2, fn. 7 (Mar. 1, 2019).

2. Discussion

a. Summary of Settlement Process

The Commission held settlement conferences in the Commission's hearing room on September 7 and 14, 2018. Through separate procedural orders, all parties were given notice of the settlement conferences and an opportunity to attend the conferences. After the September 14th conference, CMP pursued bilateral discussions with several parties including the IECG, OPA, CLF, Ms. Kelly, and "representatives from Franklin County." Hearing Tr. at 153, 179 (Mar. 7, 2019). On November 8, 2018, CMP, Avangrid, the IECG and OPA met to discuss settlement issues. *Id.* at 155. Following that meeting, CMP had bilateral discussions with the GEO, CLF, Acadia Center, and "other interested stakeholders." *Id.* at 157.

On or about December 30, 2018, IECG and OPA met with representatives of HQUS. *Id.* at 158. During the month of January, there were several meetings involving HQ, HQUS, CMP, GEO, IECG, and OPA. *Id.* at 158. Also during the month of January, CMP had bilateral discussions with several parties and stakeholders including CLF, Acadia Center, IBEW, the Chamber, Lewiston, WM&RC, Former State Senator Saviello, GFDC, Representative Landry, Ms. Kelly, and FMM about issues relating to settlement. *Id.* at 160-162, 179. During this time, OPA also had bilateral discussions with Former State Senator Saviello, GFDC, Representative Landry, and CLF, and IECG had discussions with NRCM. *Id.* at 163-165.

As a result of their bilateral and multilateral settlement discussions, HQ, HQUS, CMP, IECG, OPA, GEO, CLF, and Acadia Center entered into a term sheet in late January 2019. *Id.* at 160.

The Commission held settlement conferences in the Commission's hearing room on February 5 and 12, 2019. Through separate procedural orders, all parties were given notice of the settlement conferences and an opportunity to attend the conferences. During the February 5th settlement conference, CMP presented the term sheet that had been agreed to in late January. *Id.* at 169. After the February 5th settlement conference, CMP had bilateral discussions about the term sheet with Former State Senator Saviello, GFDC, Representative Landry, NextEra, and the Towns of Alna and Jackman. *Id.* at 169, 171. The evolving Stipulation was modified based on these conversations. *Id.*

CMP presented the Stipulation to those present during the settlement conference held at the Commission on February 12th. *Id.* at 170. Additional changes were made to the Stipulation following the February 12th settlement conference. *Id.* Between February 12th and February 20th, CMP had bilateral discussions with MREA and RENEW. *Id.* at 171. CMP sent the final Stipulation to all parties via e-mail on February 20, 2019. *Id.* at 170. CMP received feedback on the Stipulation from FMM and the Towns of Alna and Jackman. *Id.* at 171. CMP filed the Stipulation on February 21, 2019.

While GINT participated in all four settlement conferences held in the Commission's hearing room, GINT does not recall ever receiving notice of, or invitation to, any bilateral or multilateral settlement discussions that took place between September 14, 2018 and February 20, 2019. *Id.* at 176. Neither the Town of Caratunk nor Old Canada Road received notice of, or invitation to, any bilateral or multilateral settlement discussions that took place between September 14, 2018 and February 20, 2019. *Id.* at 180. The IECG states that, during the September 14, 2018 to February 20, 2019 timeframe, it had two conversations with an NRCM representative about settlement issues and, from those conversations, "it was clear...that there was no interest in settling." *Id.* at 178.

b. Decision

Section 8(D)(1) of the Commission's Rules of Practice and Procedure provides:

All parties shall be given an opportunity to participate in stipulation discussions. Accordingly, persons initiating such discussions should provide reasonable notice of discussions to all other parties where feasible, hold discussions at the office of the Public Utilities Commission where practicable and defer execution of comprehensive stipulations until the deadline for petitions to intervene, if any, has passed. In addition, all parties and proposed intervenors must be provided sufficient opportunity to review any executed stipulation in order to allow reasonable opportunity to object to the stipulation.

As noted above, Section 8(D)(7) provides that, when deciding whether to approve a stipulation, the Commission must consider four criteria. The second of

the four criteria is “[w]hether the process that led to the stipulation was fair to all parties.”

In this case, parties opposed to the Stipulation argue that the process that led to the Stipulation was not fair for several reasons including (1) the Stipulation was negotiated between and among a small number of parties; (2) there were few changes made to the agreement after it was presented to the parties during the February 5th and February 12th settlement conferences; (3) the settling parties excluded some parties in the settlement discussions; (4) the public was not adequately represented in settlement discussions; (5) the settling parties were not required to provide evidence, analysis, or explanation about the specific Stipulation terms; (6) the Stipulation does not address many of the key issues raised in the case; (7) CMP failed to do the analysis necessary to evaluate the provisions of the Stipulation; and (8) the stipulating parties failed to adequately consider possible amendments to the Stipulation.

In the *Verizon AFOR Case*, the Commission held that neither Section 8(D)(1) nor the Commission’s second stipulation review criterion requires that every party be included in every settlement meeting. In the *Verizon AFOR Case*, the Commission also found that failure to include a party in certain settlement discussions was not unreasonable, because the views of the party were clear and the other parties did not plan to incorporate such views in their agreement. As the above summary of the Stipulation settlement indicates, CMP, IECG, and OPA had numerous bilateral and multilateral discussions with several parties in this case and during the course of such discussions, and the four settlement conferences held in the Commission’s hearing room, it became clear that the positions of parties such as NRCM, GINT, Caratunk, and Old Canada Road, were not reconcilable with the positions of the settling parties.

In deciding whether the process that lead to the Stipulation was fair, the entire process must be looked at as a whole. See, *Verizon AFOR Case*, Order Approving Stip. at 9. In this case, the Stipulation was filed with the Commission after the hearing and briefing stages and the parties have had a full opportunity to present their positions to the Commission. In addition, the Examiners scheduled four noticed settlement conferences, which were open to all parties in the case. Furthermore, the process allowed those parties who were not signatories to the Stipulation, to file written objections and also provided such parties with an opportunity to present oral argument on the Stipulation. Under comparable circumstances in the *MPRP Case*, the Commission found that the stipulation process in that that case was fair to all parties. *MPRP Case*, Order Approving Stipulation at 21-22. In this case, the Commission finds that the overall process, including the process provided by the full litigation schedule, noticed settlement conferences, and process subsequent to the presentation of the Stipulation, was fair and that the Commission’s second stipulation review criterion has been satisfied here.

E. Stipulated Result is Reasonable, is Not Contrary to Legislative Mandate, and is in the Public Interest

The third and fourth stipulation review criteria are whether the stipulated result is reasonable and not contrary to Legislative mandate, and in the public interest. In the context of this proceeding, the Commission concludes that these stipulation approval criteria are essentially the same as the requirement in statute that the Commission find a public need to approve a transmission line project. The issue of public need is discussed in Sections IV(A), above.

As discussed above, the Commission finds that, even without the additional benefits provided by the CPCN Conditions set forth in Stipulation Section V.B (Stipulation Benefits), the NECEC would meet the statutory public need and public interest standards of Title 35-A, Section 3132 and, thus, would be granted a CPCN. The Commission finds, further, that these provisions of the NECEC Stipulation, and the benefits they provide, augment the market benefits and the direct, indirect, and induced macroeconomic benefits which will accrue to Maine from the development, construction, and operation of the NECEC. The Stipulation Benefits are described in Section VI(A) and discussed and evaluated below.

1. Positions of the Parties on the Stipulation Benefits

CMP, OPA, and IECG argue that the Stipulation will provide additional, substantial benefits that supplement the benefits provided by the Project and further support the conclusion that the Stipulation is in the public interest. Specifically, the transfer of the Project into a separate entity and other ring-fencing provisions ensure that Maine ratepayers will not bear the cost of the NECEC. Additionally, they cite the creation of a \$50 million Low-Income Customer Fund and \$140 million Rate Relief Fund; the construction of broadband infrastructure in the NECEC corridor; the creation of additional funds, including, \$15 million for heat pumps, the \$15 million EV fund, the \$5 million Franklin County fund, and the \$6 million education fund as providing an additional \$250 million in benefits to Maine Citizens and energy consumers. OPA and IECG also argue that these benefits are tangible and enforceable, are incremental to the \$1 billion in benefits already provided by the NECEC and incorporate the customer protections previously agreed to by CMP as part of this proceeding. Finally, OPA and IECG state that, collectively, the benefits and protections substantially exceed any costs or risks related to the Project.

GINT argues that most of the benefits are illusory or unproven and that CMP overstates the value of the benefits, for example, payments to the rate relief fund are “paltry” and represent only about 9 cents per month for the average CMP residential customer.⁴² GINT states that the negative effects of the Project include: decrease in

⁴² Exhibit A to GINT’s March 1, 2019 Comments on the Stipulation contains GINT’s calculation of the Rate Relief Fund benefits. GINT’s Total Rate Relief shown includes the annual \$1.5 million consideration payment from NECEC LLC to CMP and the

efficiency in the regional electric grid resulting from increased system congestion and line losses; distortion of the wholesale energy markets; premature retirement of electric generating plants in Maine; elimination of new renewable plants in Maine due to increased interconnection costs and system inefficiencies; consequent loss of Maine jobs and taxes; increased carbon dioxide emissions in the region; and adverse effects on tourism in Western Maine. Finally, GINT states that the Stipulation does not adequately reimburse ratepayers for the purchase of the NECEC corridor or for the value of having CMP employees available for operations and repair of the line.

Citing a statement made at the March 7th Hearing in which CMP expressed concerns about the effect that including community benefits packages in the proposed transmission projects would have on transmission rates, NextEra states that, by CMP's own admission, the benefits contained in the Stipulation are not in the public interest. NextEra also questions the Commission's authority to enforce a number of the Stipulation benefits against Hydro-Québec and HQUS because the Commission lacks jurisdiction over third-party, foreign entities.

Other supporters of the Stipulation, including CLF, Acadia Center, GEO, FMM, IBEW, the Chamber, and Lewiston state that the Stipulation includes many benefits for Maine and the Project is poised to create additional jobs, fund electric vehicles, reduce electricity prices expand broadband access, and substantially reduce the State's carbon footprint. The Chamber and Lewiston argue that certain benefits are of particular significance, most notably the Low-Income and Rate Relief Funds which will particularly benefit the City because of its relatively high poverty rate and old housing stock and the likelihood of new local jobs because Lewiston will be the site of the NECEC converter station.

Other opponents of the Stipulation, including Caratunk, NRCM, RENEW, MREA, ReEnergy, and Old Canada Road cite a number of concerns with the settlement package, including that it does little to address the fundamental flaws in the Project or address the likely impacts of the Project on the land, brand, citizens, or ratepayers of Maine. Additionally, they argue that some of the benefits are spread over such a long period of time that the results will be imperceptible to Maine ratepayers, specifically the Rate Relief Fund payable over 40 years and the Low-Income Customer Benefits Fund, also payable over 40 years. Opponents with an interest in renewable generation argue that the NECEC will harm renewable energy development in Maine and the associated benefits to Maine ratepayers and will harm the attainment of Maine's economic development, renewable energy, and GHG reduction goals. Additionally, ReEnergy argues that the Stipulation does nothing to mitigate the substantial and irrevocable damage that will be done to in-state generators due to congestion on the Maine-New

annual \$3.5 million CMP Rate Relief Fund as separate and additive items. The Commission understands that the Stipulation provides that CMP will direct the annual consideration payment from NECEC LLC to the Rate Relief Fund and it is not, therefore, a separate, additive benefit.

Hampshire interface. Finally, Ms. Kelly urges the Commission to delay any action on the Stipulation or the proceeding until the DEP and LUPC proceedings are complete.

2. Discussion and Evaluation of Stipulation Benefits

As noted above, the Commission finds that the benefits provided by the Stipulation augment the market benefits and the direct, indirect, and induced macroeconomic benefits which will accrue to Maine from the development, construction, and operation of the NECEC. In addition, the Stipulation Benefits contain a number of provisions intended to protect CMP ratepayers from the risks and costs associated with the NECEC development, construction, and operation. As noted above, the Stipulation characterizes these benefits and protections as “CPCN Conditions” and the Stipulating Parties recommend that the issuance of a CPCN be conditioned on these terms contained in Section V.B. of the Stipulation. The Commission’s assessment and valuation of these benefits and ratepayer protections is discussed below and summarized in Figure VI.2. Because many of the benefit funds are established and/or disbursed over time, the valuation is provided on both a nominal and present value basis.⁴³

a. Ratepayer Protections and Compensation

i. NECEC Project Ownership and Affiliate Transactions

Stipulation Sections V.B.1. a, c, d, f, and g contain a number of provisions intended to insulate CMP from the risks of the NECEC. Specifically, the Project and any associated development costs will be transferred from CMP to the special purpose entity, NECEC LLC, prior to the start of construction. NECEC LLC will be within the Avangrid Networks family of companies but will not be a direct subsidiary of CMP. Additionally, NECEC LLC will not participate in money-pooling arrangements or credit facilities with CMP and CMP will have no responsibility for any on-going costs of the Project. Any transactions between CMP and NECEC LLC will be governed by a Service Agreement or other affiliate agreements to be approved by the Commission. NECEC LLC will put into place an AVANGRID, Inc. guaranty with respect to its payment obligations for the EV, heat pump, host community and education funds and grant CMP a security interest in its payment rights from HQ and HQUS for the rate relief and low-income funds. Finally, NECEC LLC will not use CMP’s brand name, reputation or customer relations to its benefit.

These ring fencing arrangements provide effective separation of CMP from the risks associated with the remaining development efforts and, most particularly, the construction of the Project. These protections provide a clear benefit to CMP ratepayers. The transactions and on-going interactions between CMP and NECEC

⁴³ The present values shown in Figure VI.2 were calculated using an 8.5% discount rate. The ranges shown in Figure I.1 are based on present value calculations using discount rates of 7% and 8.5%.

LLC, and among CMP, NECEC LLC, and other entities involved in the NECEC Project, including HQ, HQUS and AVANGRID, Inc., will be governed by various agreements, including the proposed NECEC Transfer Agreement (Attachment B to the Stipulation), the Service Agreement (Exhibit H to the NECEC Transfer Agreement), the guaranty provided by AVANGRID, Inc., and the HQUS Support Agreement. The Commission does not approve the form of any agreements provided in connection with the Stipulation but will conduct proceedings pursuant to Title 35-A, Sections 707 and 708 to approve the creation of NECEC, LLC and all associated affiliated transactions. The Commission emphasizes that, in these proceedings, the issues determined in this proceeding will not be relitigated.

ii. Consideration Payment

Section V.B.1.b provides that, as “consideration for the conveyance of the NECEC, including without limitation, the Real Estate Interests, the Permits, the TSAs, the Third-Party Vendor Agreements, the Related Assets, and any goodwill of CMP related to the NECEC,” NECEC LLC will pay to CMP the sum total of \$60 million, payable in 40 annual installments of \$1.5 million beginning when the NECEC reaches commercial operations. The present value of this flow of payments is approximately \$12 million. CMP will direct these payments to the Rate Relief Fund and the benefit the Rate Relief Fund provides to ratepayers is discussed below. Pursuant to statute and rule, however, the Commission must determine the appropriate value to assign to the consideration payment for the transfer of the NECEC irrespective of how CMP is directing the funds it receives. Title 35-A, Section 707(3)(G), requires that “for any contract of arrangement expected to involve the use by an affiliated interest of utility facilities, services or intangibles, including good will or use of a brand name, the Commission shall determine the value of those facilities, services or intangibles.” In addition, although the Commission is making no determination here as to whether the NECEC is a non-core utility service, Section 4.C.3 of Chapter 820 of the Commission’s Rules provides useful guidance as to the valuation of any goodwill associated with the NECEC that CMP is transferring. Section 4.C.3 provides:

The value of good will shall be presumed to be, and calculated as, 1% of the total capitalization of the affiliate, or 2% of the gross revenues of the affiliate, whichever is less, and shall be paid annually by the affiliate. Where the name of the utility has been used in Maine by the utility for less than 3 years, the value of good will shall be presumed to be zero. At the end of six years from the date the affiliated transaction is approved or upon the date that the affiliate commences use of the good will, whichever is later, the value of good will is zero.

GINT argues that the Commission should value the right-of-way by reference to a 2012 study for the Western Electricity Coordinating Council and estimates made by American Electric Power, both of which suggest that the value of the corridor should be 10% of total project costs, or \$100 million. GINT Comments at 4 (Mar. 1, 2019). The Commission declines to follow that estimating methodology. In this case, NECEC LLC can be viewed as any other interconnecting generator which is required to pay for incremental upgrades but not for facilities and land that already exist. The property cost

of the new corridor from the Canadian border to the Kennebec Gorge was approximately \$12.5 million. EXM-001-017, Attachment 1. These parcels were acquired largely between 2016 and 2017 in what appear to be arms-length transactions. There is no evidence that the cost of real property in Western Maine has changed substantially in the last several years. The Transfer Agreement contemplates the transfer of only half of this part of the corridor with a value of approximately \$6 million.

With respect to goodwill, in the context of the Massachusetts 83D solicitation, CMP emphasized the value of its experience, proven track record in developing large transmission projects and financial strength as competitive advantages it offered. In this situation, where establishing a precise value for goodwill would be exceptionally difficult, the Commission can follow the guidance contained in Chapter 820. Using this methodology does not constitute a Commission finding that the NECEC is a Non-Core Service. As shown in Figure VI.1, assuming the total capitalization of NECEC LLC is approximately equal to the project cost and using the payment stream provided for in the TSAs, the value of goodwill would total approximately \$15 million over the first 6 years of the TSA terms or approximately \$9 million on a present value basis.

Figure VI.1

Goodwill Payments from NECEC LLC to CMP Pursuant to Chapter 820					
	At 1% of Total Capitalization		At 2% of Gross Revenue		Lesser Amount
2023	\$	10.0	\$	2.4	\$ 2.4
2024	\$	10.0	\$	2.4	\$ 2.4
2025	\$	10.0	\$	2.5	\$ 2.5
2026	\$	10.0	\$	2.5	\$ 2.5
2027	\$	10.0	\$	2.6	\$ 2.6
2028	\$	10.0	\$	2.6	\$ 2.6
Sum					\$ 15.1
PV					\$8.9

The proposed transfer includes the assumption by NECEC LLC of the obligations of CMP pursuant to the 83D bid and the TSAs. Specifically, NECEC LLC will assume the costs and risks associated with the construction of the Project. These risk of cost overruns may be substantial, especially with respect to any environmental mitigation that may be ordered by the DEP and the LUPC and the costs of the underground crossing of the Kennebec Gorge. On balance, the Commission determines that the proposed Transfer Consideration is reasonable.

iii. Transmission Rates Customer Credit

Since CMP acquired the property in the 2016-2017 time-period for the approximately 53-mile long corridor from the Québec border to the Kennebec Gorge, CMP has recorded the property as a rate base item in FERC Account 105, Plant Held for Future Use. Pursuant to FERC regulations, property may be recorded in Account 105 if and when a transmission project for development on the property is sufficiently definite. Once recorded in this account, the revenue requirements, which are comprised of a return on the property rate base (investment amount), are recovered from ratepayers through operation of the FERC formula rate. Since 2016, CMP has recovered from ratepayers in Maine and the region approximately \$1 million associated with the NECEC corridor.

Section V.B.2 of the Stipulation provides that, effective with the 2019 transmission rate change, CMP will provide a \$1.005 million rate credit to regional and local network service customers. This credit reflects the amounts that have been paid by these customers for the NECEC corridor, plus carrying costs using the FERC refund formula. Finally, Section V.B.2 provides that, upon issuance of a CPCN, CMP will remove from FERC Account 105 all NECEC-related property.

This provision provides equity for ratepayers by crediting back to them all amounts that they have paid in rates since 2016 for the NECEC property and requiring the property to be accounted for in a manner such that, on a going forward basis, no amounts will be included in rates. Because transmission rates and accounting rules are FERC-jurisdictional, including this provision in the Stipulation produces a result that avoids any potential preemption challenge that might ensue if the Commission sought to impose a condition that would produce the same result. This is a clear benefit provided by the Stipulation.

iv. New Corridor Removed from Transmission Rates

Paragraph V.B.3 of the Stipulation requires CMP to classify the portion of the corridor that will not be used by the NECEC, which will remain CMP property, as Non-Operating Property. Pursuant to FERC requirements, Non-Operating Property is recorded in FERC Account 121 and may not be included in transmission rates until such time CMP identifies a sufficiently definite transmission project for development in the corridor. Pursuant to this Stipulation provision, CMP agrees that it will not seek to recover any amounts associated with this property unless the identified transmission project that would use the corridor is otherwise eligible for rate recovery in whole or in part from Maine customers pursuant to the then-applicable FERC transmission tariff. Thus, this provision eliminates the risk that ratepayers would again be charged amounts for property associated with an NECEC-like project, or a generator lead, as they have been since 2016 for the NECEC corridor.

As with the transmission rate credit provision discussed above, because the accounting and ratemaking treatment of transmission property are FERC-jurisdictional,

including this provision in the Stipulation produces a result that avoids any potential preemption challenge that might ensue if the Commission sought to impose a condition that would produce the same result and, as such, is a clear benefit of the Stipulation.

b. Public and Ratepayer Benefits

i. Low-Income Customer Benefits Fund

Section V.B.4 of the Stipulation provides for annual payments of \$1.25 million over the 40 years following COD that will be directed to a fund to be used for the benefit of low-income electric customers throughout the State. The funds may be used to reduce the amounts that low-income customers spend for energy and may include weatherization and household energy efficiency programs. In designating uses for these funds, the OPA, in consultation with the Efficiency Maine Trust and the Governor's designee, may apply a preference for low-income energy customers in the NECEC Host Communities. This direct benefit will total \$50 million over 40 years. On a present value basis, the Low-Income Customer Fund provides approximately \$10 Million of direct benefit to the citizens of Maine.

ii. Rate Relief Fund

Section V.B.5 of the Stipulation provides for two payment streams totaling \$3.5 million annually over the 40 years following COD that will be directed to the Rate Relief Fund. First, the annual \$1.5 million consideration payment from NECEC LLC to CMP will be directed by CMP to the Rate Relief Fund. Second, NECEC LLC commits to provide an annual payment of \$2 million to CMP for the Rate Relief Fund. The Stipulation provides that the Rate Relief Fund will be paid to ratepayers on a per kilowatt hour basis through stranded costs or a similar per kilowatt hour mechanism. This direct ratepayer benefit will total \$140 million over 40 years. On a present value basis, the Rate Relief Fund provides approximately \$28 Million of direct ratepayer benefit.

iii. Broadband Benefits

The broadband benefits in Section V.B.6 of the Stipulation include provisions for including fiber optic facilities and equipment on the transmission line, with an estimated value of \$5 million, and the creation of a \$10 million broadband fund to be used to support high speed broadband infrastructure in the host communities. This direct benefit will total \$15 million. On a present value basis, the broadband benefits provide approximately \$9 million of direct benefit to the host communities.

iv. Heat Pump Benefits

Section V.B.7 establishes the Heat Pump Benefits Fund which includes the creation of a \$15 million fund to support the installation of heat pumps or other future efficient heating technologies. The disbursement of these funds may include a

preference for targeted initiatives to reach low- and moderate-income individuals and communities. This direct benefit will total \$15 million. On a present value basis, the heat pump benefits provide approximately \$7.5 million of direct benefit to the State.

v. Electric Vehicle (EV) Funds

The EV benefits contained in Section V.B.8 include two funds, a \$5 million fund to provide rebates to defray the cost of charging installations and consumer rebates on the purchase of an EV, and a \$10 million fund to support the deployment of a statewide fast and ultra-fast public charging station infrastructure throughout the State. This direct benefit will total \$15 million. On a present value basis, the EV benefits provide approximately \$9 million of direct benefit to the State.

vi. Franklin County Host Community Benefits

The Franklin County community benefits in Section V.B.9 include the establishment of a \$5 million fund for the benefit of communities in Franklin County. This fund will support economic and community development activities for the benefit of Franklin County residents. This direct benefit will total \$5 million. On a present value basis, this fund provides approximately \$2.4 million of direct benefit to Franklin County.

vii. Education Grant Funding

Section V.B.10 contains the education benefits which provide for a \$1 million grant to the University of Maine for research and development associated with the commercialization of marine wind generation technology and for the creation of a \$5 million fund to provide programs and scholarships for needy Maine students to attend the University of Maine at Farmington and vocational and training programs and scholarships in the math, science, and technology fields in Franklin and Somerset Counties. This direct benefit will total \$6 million. On a present value basis, this fund provides approximately \$3.3 million of direct benefit to the University of Maine and the residents of Franklin and Somerset Counties.

c. Other Commitments

i. Mitigating Impacts on Transmission System

Section V.B.11 of the Stipulation contains several commitments by CMP and NECEC LLC to initiatives intended to mitigate the impacts of the NECEC on the transmission system and existing and future energy resources in Maine. Although these initiatives may be valuable undertakings, the Commission does not assign a direct monetary benefit to these commitments.

ii. Regional Carbonization

Section V.B.12 contains the commitment by CMP and NECEC LLC to participate in and provide funding for regional decarbonization studies. Although this initiative may be a valuable undertaking, the Commission does not assign a direct monetary benefit to this commitment.

iii. Securitization

The provisions of Section V.B.13 address ways to accelerate the receipt of benefits associated with the Low-Income Fund and the Rate Relief Fund by providing \$1 million in underwriting fees and other costs. Any funds not used for this purpose will be disbursed to the Rate Relief Fund. The Commission values this commitment at \$1 million on a nominal basis. Because no time frame is associated with the use of these funds for their intended purpose, the Commission cannot determine a present value.

iv. HQ Support Agreement

The HQ Support Agreement contained in Section V.B.14 is intended to provide support to the commitments made by HQUS as part of the Stipulation. The Commission does not assign any value to this support other than the values already established as part of other Stipulation sections.

In addition, the HQ Support Agreement will contain HQUS's commitment to provide CMP 400,000 MWh annually of Environmental Attributes related to deliveries of hydroelectric power to New England. There is no active market for these Environmental Attributes, which are a creation of the Massachusetts statute which led to the 83D solicitation. The Commission does not assign any value to this commitment.

v. Maine Worker Preferences

Section V.B.15 contains the commitment of NECEC LLC, and its contractors working on the construction of the NECEC, to give preference to hiring Maine workers, all other factors being equal and consistent with applicable law and applicable labor agreements. Although this commitment may be valuable, the Commission does not assign a direct monetary benefit to it.

Figure VI.2

NECEC Stipulation Benefits			
Item	Timing	Total Nominal (\$ millions)	Present Value (\$ millions)
Ratepayer Benefits			
Rate Relief Fund	2023-2062	\$ 140.000	\$ 28.575
Transmission Credit	July 1, 2019	\$ 1.005	\$ 1.005
Low Income Customer Benefits			
Low Income Fund	2023-2062	\$ 50.000	\$ 10.205
Community and State-wide Benefits			
Broadband Benefits	2023-2027	\$ 15.000	\$ 9.295
Heat Pump Benefit	2023-2030	\$ 15.000	\$ 7.762
Host Community Benefits	2023-2030	\$ 5.000	\$ 2.367
EV Benefits	2021-2028	\$ 15.050	\$ 9.319
Education Grants	2019-2032	\$ 6.000	\$ 3.289
NTA Study	Unknown	\$ -	\$ -
Regional Decarbonization Planning	Unknown	\$ -	\$ -
Securitization	Unknown	\$ 1.000	\$ -
Environmental Attributes	2023-2062	\$ -	\$ -

VII. CONCLUSION

For the reasons discussed in this Order, the Commission concludes that the benefits from the development and operation of the NECEC to Maine ratepayers and citizens significantly outweigh the costs and detriments of the Project. In addition, the Commission concludes that the Stipulation, filed in this proceeding on February 21, 2019, provides significant additional benefits to Maine. Accordingly, the Commission concludes that: (1) the NECEC meets the public need and public interest standards required by Title 35-A, Section 3132; and (2) the Stipulation filed in this proceeding on February 21, 2019 satisfies the stipulation approval criteria contained in Chapter 110, Section 8(D)(7) of the Commission rules.

Accordingly, the Commission

ORDERS

1. That Central Maine Power Company is, hereby, granted a Certificate of Public Convenience and Necessity for the New England Clean Energy Connect. Specifically, the Certificate of Public Convenience and Necessity applies to the construction of the transmission lines and

- substation components listed in Section II(A) of this Order, and any related additional transmission facilities that ISO-NE determines are necessary to meet the requirements of (i) Section I.3.9 of the ISO-NE's Transmission, Markets and Services Tariff or (ii) the ISO-NE's CCIS, all at no cost to Maine electricity customers;
2. That the Stipulation, filed in this proceeding on February 21, 2019, and attached to this Order, is hereby approved;
 3. That, beginning on July 1, 2019, and every 6 months thereafter, until the New England Clean Energy Connect is placed into commercial operation, NECEC LLC will file progress reports with the Commission summarizing any significant developments in the permitting, development and construction of the NECEC;
 4. That, beginning on July 1, 2019, and every six months thereafter, Central Maine Power Company and NECEC LLC will file compliance reports detailing the activities and provision of benefits required by the Terms of the February 21, 2019 Stipulation;
 5. That, on or before July 1, 2019, Central Maine Power Company shall file a proposal for: (1) tracking and reporting to the Commission, on an annual basis, the property tax revenues paid by the NECEC LLC during the construction phase of the Project and during the first 10 years of its commercial operation. Such information shall include the: (1) estimated tax revenue by municipality provided by Central Maine Power Company in this proceeding; (2) a description of the New England Clean Energy Connect facilities located in each municipality; (3) the amount of property taxes for the New England Clean Energy Connect facilities paid to each of those municipalities and townships for the tax year in question; and (4) an explanation for any differences between item (1) and item (3);
 6. That, beginning on July 1, 2019 and concluding with the commercial operations of the New England Clean Energy Connect, Central Maine Power Company and NECEC LLC shall provide annual reports to the Commission detailing its ongoing outreach and communications with the host communities regarding: (1) fire and medical support issues in comparable rural areas of its system; and (2) plans to address fire and medical support issues related to the construction and operation of the New England Clean Energy Connect; and
 7. That, Central Maine Power Company shall file: (1) a petition for reorganization approval, pursuant to Title 35-A, Section 708, to authorize the establishment of the NECEC LLC; and (2) a petition for approval for affiliate transactions, pursuant to Title 35-A, Section 707, related to the development and operations of the New England Clean Energy Connect.

ORDER

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Docket No. 2017-00232

Dated at Hallowell, Maine, this 3rd day of May, 2019.

/s/ Harry Lanphear
Harry Lanphear
Administrative Director

COMMISSIONERS VOTING FOR: Vannoy
 Williamson (See Separate Concurring Opinion)
 Davis

Concurring Opinion of Commissioner Williamson

I concur with the Commission's decision in this proceeding. I write separately on one point concerning the ratepayer benefits of NECEC. I agree with the finding that the NECEC will provide clear benefits with respect to grid reliability and fuel security. The Commission's decision, however, states that these benefits cannot be quantified. That is the way that Figure I.1 had been presented.

Although I generally agree that certain other monetary benefits cannot be easily quantified, that is not the case here: there is an empirical basis to assess the value of regional grid reliability and fuel security. There is a price range estimate for the willingness to pay for fuel security in the New England region and, accordingly, a means to calculate the cost (if fuel security were to be supplied without NECEC), or a benefit (if regional fuel security were to be augmented by NECEC) for Maine ratepayers and electric customers.

ISO-NE estimates that the Reliability Must Run (RMR) provisions related to the two Mystic units at the Boston load center will increase regional costs by approximately \$102 million to \$148 million per year during the two-year program.⁴⁴ This amount is ISO-NE's willingness to pay for what it terms "fuel security" for the system we depend upon. Using the midpoint of the range as a conservative estimate, this means \$123 million is the regional price tag for the value of system reliability and wintertime fuel security. Because RMR costs are regionalized, the LNG-supplied Mystic units would cost Maine electric customers at least \$9.8 million a year annually for the years 2023-2024 and 2024-2025. Such additional costs could very well extend longer if natural gas pipeline development remains stalled in lower New England and ISO-NE continues to be short of fuel secure alternatives for winter reliability for several more winter periods.

This level of annual cost represents the market value being assigned to the region's winter fuel security problem right now for the time when NECEC transmission could be available, or more technically, what certain costs to Maine customers could be avoided if the NECEC is put in-service on schedule. This data should be reflected in our assessment.

⁴⁴ *ISO New England Inc.*, Inventoried Energy Program, Docket No. ER19-1428-000, ISO-NE Filing at 19 (Mar. 25, 2019).

NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S. § 9061 requires the Public Utilities Commission to give each party to an adjudicatory proceeding written notice of the party's rights to review or appeal of its decision made at the conclusion of the adjudicatory proceeding. The methods of review or appeal of PUC decisions at the conclusion of an adjudicatory proceeding are as follows:

1. Reconsideration of the Commission's Order may be requested under Section 11(D) of the Commission's Rules of Practice and Procedure (65-407 C.M.R. 110) within **20** days of the date of the Order by filing a petition with the Commission stating the grounds upon which reconsideration is sought. Any petition not granted within **20** days from the date of filing is denied.
2. Appeal of a final decision of the Commission may be taken to the Law Court by filing, within **21** days of the date of the Order, a Notice of Appeal with the Administrative Director of the Commission, pursuant to 35-A M.R.S. § 1320(1)-(4) and the Maine Rules of Appellate Procedure.
3. Additional court review of constitutional issues or issues involving the justness or reasonableness of rates may be had by the filing of an appeal with the Law Court, pursuant to 35-A M.R.S. § 1320(5).

Note: The attachment of this Notice to a document does not indicate the Commission's view that the particular document may be subject to review or appeal. Similarly, the failure of the Commission to attach a copy of this Notice to a document does not indicate the Commission's view that the document is not subject to review or appeal.

MDEP Permit



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

DEPARTMENT ORDER

IN THE MATTER OF

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 53.1-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.

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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 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:

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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 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 53.1-mile long, 320-kV DC transmission line. The applicant proposes to use the southernmost 150 feet of the ROW for the Segment 1 corridor.

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This segment is located primarily in working forest. Segment 1 crosses 480 freshwater wetlands; 280 rivers, streams, or brooks, of which 237 contain coldwater fisheries habitat, including the Upper Kennebec River, which is an Outstanding River Segment; six Inland Waterfowl and Wading Bird Habitats (IWWH) with 8.23 acres of conversion; and six Significant Vernal Pools (SVP).¹ 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 vegetation during initial clearing and subsequently to allow non-capable woody vegetation to grow up to ten feet tall outside 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 wetland impact by 12,286 square feet, and eliminates impacts to one SVP and one stream that contains brook trout.⁶

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.

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

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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 146 freshwater wetlands; 68 rivers, streams, or brooks, 46 of which contain coldwater fisheries habitat; two IWWHs with 1.13 acres of conversion; and 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 non-capable 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: 489 freshwater wetlands; 235 rivers, streams, or brooks, of which 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 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 remove all woody vegetation during initial clearing for construction and subsequently allow non-capable woody vegetation to grow up to 10 feet tall 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 Substation and the Surowiec 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 but will result in 0.006 acres of SVP upland fill and 0.02 acres of wetland fill. Segment 4 crosses: 132 freshwater wetlands; 33 rivers, streams, or brooks, 23 of which contain coldwater fisheries habitat; no IWWHs; and 10 SVPs.

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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 result in 0.03 acres of wetland fill and 3.6 acres of DWA conversion. Segment 5 crosses 157 freshwater wetlands; 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; two IWWHs; and four SVPs.

(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 4.87 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.

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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.

(3) 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

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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 Lands for the corridor across West Forks Plantation and Johnson Mountain Township T2R6 BKP WKR. 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 constitute sufficient showing of title, right, or interest in this portion of the proposed corridor for the Department to process the application. The Merrill Strip Alternative, which is described in more detail below, eliminates the portion of the line which was to be located on land owned by the Passamaquoddy Tribe.

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.

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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 Caratunk
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)

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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.

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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 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

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.

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“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 filing 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, and provided 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

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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.

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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.

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.

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- 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 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.

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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.

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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.⁹ 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.)

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).

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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 5dBA higher than the Department's quiet 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 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 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 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.

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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, § 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

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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.

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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 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.

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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

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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 Sharon.

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, 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 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.

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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 21¹⁰ 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:

- 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

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

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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
- 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

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

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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 further reduce the project's visibility from Beattie Pond. With the Merrill Strip Alternative route, existing vegetation and topography will screen structures, conductors, and shield wires from view from all but approximately 8 percent of the pond. Where visible, the tops of two structures, conductors, and shield wires could be seen in between the tops of trees at a distance ranging from approximately 0.75 to 1 mile. (Minimal, as revised)
- 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

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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)
- 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.

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.

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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 conductors¹⁴ 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)
- 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.¹⁵ 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)

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.

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.

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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 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 co-located 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

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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 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. (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

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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

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

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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

¹⁶ The purpose 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.

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SQC dated November 23, 2018.¹⁷ 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, 2018.¹⁸ 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 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.

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.

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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 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

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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 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

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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 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. § 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).

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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 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.

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.

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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 SQC 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. SQC 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

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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 SQC'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.²⁰ 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.

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

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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.

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).

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.

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(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.

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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.

b. 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

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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

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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

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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. Existing vegetation and topography would screen the project from view from most of the pond. Any project visibility would be minimal. 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 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 areas 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:

- Tapers the 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 #3006-731 and #3006-724).

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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 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.

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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

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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.

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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

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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 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.

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 be 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.

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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

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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.

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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

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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.

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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 be 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 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 53.1-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.

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.

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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. EXISTING USES

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, is 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.

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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.

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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. In addition, 38 M.R.S. § 487-A(4) requires the Department to consider whether any alternatives to the proposed location and character of the transmission line may lessen its impact without unreasonably increasing its cost.

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.

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.

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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.

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.

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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 obtained an easement for approximately 20 acres of land to enable it to propose using the

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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 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.

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The applicant's proposal also includes: 674 crossings of rivers, streams, or brooks, of which 471 contain coldwater fisheries and five are Outstanding River Segments; 15.026 acres of impact to IWWH, which includes 0.017 acres of fill; 31.487 acres of impact to SVPs,²⁵ which includes 1.46 acres of permanent fill, 29.607 acres of clearing in uplands, and 3.895 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
- 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.

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.

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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 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. 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.

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 375 since this letter was written. (See Appendix E for a list of waterbodies crossed by the project.)

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- 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
- 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 other 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

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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.

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 of 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.

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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 Dickinson, 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 cost, 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

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the underground transmission line within the travel way of the road.²⁸ 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.

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.

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.

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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-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

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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 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 poolscares, would be unreasonably impacted by being fragmented by the clearing of vegetation for the proposed transmission line.

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.

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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 Simons-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, Simons-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 53.1-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

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(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.

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 length 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.

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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

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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 pre-cast 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,

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and other natural resources. While this is possible, as 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 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.

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In sum, the Department finds that the selected above ground alternative and associated substation improvements are the least environmentally damaging practicable alternatives. Additionally, in the course of evaluating the proposed transmission line, including as part of the Department's assessment of the applicant's alternatives analysis and review of scenic impacts and wildlife impacts, the Department considered evidence regarding the transmission line location, character and impact on the environment and risks to public health or safety. The Department finds no further project modification or conditions regarding the transmission line's location, character, width, or appearance, beyond what is required by this Order, are warranted, under 38 M.R.S. § 487-A(4) or otherwise, to lessen the transmission line's impact.

(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

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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 provide 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 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).

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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. Simons-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

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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.

How the vegetation within the tapered areas along Segment 1 is managed will influence the environmental benefit of this form of mitigation. In updating its VCP and VMP as required by this Order, in addition to explaining how the tapered vegetation heights more fully described in Appendix C will be achieved, the applicant must describe how the vegetation will be managed to ensure tapering minimizes the environmental impact of the corridor to the greatest extent practicable, including reasonable efforts to avoid the growth of even-aged stands within each taper.

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 Simons-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 with poles only minimally taller, or no taller, than proposed.³⁰

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

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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 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.

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.

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

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These Wildlife Areas, which total approximately 14.08 miles along the 53.1-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 53.1-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 if it would encroach into the conductor safety zone. The tapering and taller vegetation required by this Order help minimize the impacts associated with fragmentation; they do not eliminate them. The proposed corridor will not provide habitat for interior forest species such as the pine martin and there remains an edge effect created by access roads even in areas with taller vegetation. The shorter vegetation in the wire zone of the tapered areas creates an edge effect as well.

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, the Department finds this estimated area of impact remains a reasonable baseline for evaluating the appropriate amount of additional conservation that should be required. This is based on the fact that even with tapering and taller vegetation, Segment 1 will have an impact on wildlife for which mitigation is required. Factoring in the other forms of mitigation 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

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mitigation of those impacts, the Department commonly applies an 8:1 ratio³³ and finds that that ratio and resulting conservation, 40,000 acres, is reasonable and appropriate here to ensure the applicant has made adequate provision for the protection of wildlife.

Within 18 months of the date of this Order, CMP must develop and submit to the Department for review and approval a plan (the Conservation Plan) to permanently conserve 40,000 acres in the vicinity of Segment 1. The Conservation Plan must:

- Establish as its primary goal the compensation for the fragmenting effect of the transmission line on habitat in the region of Segment 1 and the related edge effect by promoting habitat connectivity and conservation of mature forest areas;
- Identify the area(s), with a focus on large habitat blocks, to be conserved and explain the conservation value of this land; any conservation area must be at least 5,000 acres unless the area is adjacent to existing conserved land or the applicant demonstrates that the conservation of any smaller block, based on its location and other characteristics, is uniquely appropriate to further the goals of the Conservation Plan;
- Include a draft forest management plan establishing how, consistent with the primary goal of the Conservation Plan, the conservation area(s) will be managed, including to provide blocks of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitat;
- Explain the legal interest, such as fee ownership or a working forest conservation easement, that will be acquired in each area; the proposed owner or holder of this interest; and the qualifications of each proposed owner or holder;
- Include preliminary consent from any proposed owner or holder;
- Explain how the applicant will ensure the availability stewardship funding (e.g., funding for monitoring and enforcement) needed to support achievement of the goals of the Conservation Plan; and
- Ensure the Department will have third party enforcement rights.

Prior to commercial operation of the project, the approved Conservation Plan must be fully implemented, unless, upon a showing by the applicant that it has made reasonable, good faith efforts to implement the Conservation Plan and additional time, not more than four years from the date of this Order, is needed, the Department approves an extension of the implementation deadline. Prior to implementation, all forest management plans, and all conservation easements, deed restrictions, covenants, or other legal instruments designed to fulfill the objectives of the Conservation Plan, must be submitted to the Department for review and approval.

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).

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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.³⁴

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, § 9³⁵; what habitat qualifies as an IWWH and TWWH is specified in Chapter 335, § 10.

As discussed in more detail above, the applicant's project will impact 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

³⁴ The vegetation management required by this Order, including as identified in Appendix C, is integral to the Department's decision and necessary to ensure the project does not violate applicable statutory or regulatory standards.

³⁵ 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 poolscapes 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.

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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 resources³⁶ 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;³⁷ and
- 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 \$623,657.53 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 \$877,010.06 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

³⁶ Protected natural resources include rivers, streams, brooks, SVP, IWWH, coastal wetlands, and habitats for threatened, or endangered species.

³⁷ Within Segment 1, CMP will not use any herbicide at all.

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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 \$877,010.06 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 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 proposal would have an unreasonable 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

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Segment 1, all coldwater fisheries streams in all segments, 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.³⁸ Inside the wire zone all capable 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 specimens 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 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.

³⁸ Additionally, no herbicide use will be allowed anywhere in the Segment 1 corridor.

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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 of 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 Smart³⁹ 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:

- 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).

³⁹ 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.

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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);
- Limiting construction activities in mapped habitat for Rusty Black Birds to between June 1 and April 19 (prohibiting construction between April 20 and June 30); and

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- 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 4.12 acres of wetland and indirectly impact 105.25 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.⁴⁰ 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.

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, 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.

⁴⁰ 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.

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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 VCM 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.⁴¹ 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.)

⁴¹ 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.

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(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 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 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

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- 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 July 1 and April 19 (prohibiting construction between April 20 and June 30) 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 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;
 - Contributes, prior to the start of construction:
 - A total of \$877010.06 to the ILF program for unavoidable impacts to SVPs (\$623,657.53) and IWWHs (\$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 18 months of the date of this Order, develops and submits to the Department for review and approval a Conservation Plan, consistent with Section 7(D)(2)(a)(3), to permanently conserve 40,000 acres in the vicinity of Segment 1. Prior to commercial operation of the project, the approved Conservation Plan must be fully implemented, unless, upon a showing by the applicant that it has made reasonable, good faith efforts to implement the Conservation Plan and addition time, not more than four years from the date of this Order, is needed, the Department approves an extension of the implementation deadline. Prior to implementation, all forest management plans, and all conservation easements, deed restrictions, covenants, or other legal instruments designed to fulfill the objectives of the Conservation Plan, must be submitted to the Department for review and approval.

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:

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- 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 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 archeological survey report.

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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 co-located 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.

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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 the 1980s. 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 co-located line within a pre-existing transmission line right of way be unreasonable.⁴²

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).)

⁴² 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.

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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 75-foot 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 public wells, identified by the applicant.

B. Department Analysis, Findings, and Conclusions

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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, 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 co-located 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.

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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 of soil or sediment.

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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,

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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

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

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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.

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(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, Coopers Mills,

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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. 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

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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 grubblings. 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 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.

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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.

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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."⁴³ The Department reviewed documents in the PUC's proceeding, including the London Economics International, LLC report.⁴⁴ The Department also reviewed the Examiner's Report and finds its conclusions to be credible. The Department 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.

⁴³ Public Utilities Commission Examiner's Report (March 29, 2019), Docket No. 2017-00232 at 114.

⁴⁴ "Independent Analysis of Electricity Market and Macroeconomic Benefits of the New England Clean Energy Conned Project" dated May 21, 2018, prepared by London Economics International, LLC.

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18. DECOMMISSIONING REQUIREMENTS

Segment 1 is a new transmission line corridor in a largely undeveloped area of the State. The Department finds that to ensure this segment of the project and associated infrastructure will not adversely affect the scenic character and natural resources of the region, 38 M.R.S. § 484(3), Segment 1 must be decommissioned when this portion of the project reaches the end of its useful life or the applicant ceases operation of this transmission line. Therefore, the applicant must demonstrate, in the form of a decommissioning plan, the means by which decommissioning of Segment will be accomplished. The plan must be submitted within one year of the start of commercial operation of the project. The decommissioning plan must include the following:

- A. Trigger for implementation of decommissioning. The current contracts are valid for a period of 20 years, but may be renewed. If the contracts are not renewed or for some other reason, the Segment 1 transmission line does not conduct electricity for a period of 12 consecutive months, decommission must begin within 18 months of the end of the contract or the last day of operation, whichever comes first.
- B. Description of work. The description of work contained in the plan must include the manner in which the transmission line, structures, and other components of the project would be dismantled and removed from the site. Subsurface components must be removed to a minimum of 24 inches below grade, and disturbed areas must be permanently stabilized. At the time of decommissioning, the applicant must submit a plan for continued beneficial use of any components proposed to be left on-site to the Department for review and approval.
- C. Financial Assurance. The plan must include financial assurance for the decommissioning costs in the form of a decommissioning bond, irrevocable letter of credit, establishment of an escrow account, or other form of financial assurance accepted by the Department, for the total cost of decommissioning. The cost of decommissioning must be reevaluated in years 10 and 15 of commercial operation, and every five years thereafter, and the amount of financial assurance adjusted remains sufficient to cover the full cost of decommissioning.

Provided the applicant submits a decommissioning plan and complies with the requirements described above, the Department finds the project will be adequately decommissioned at the end of its useful life and will not adversely affect the scenic character and natural resources of the region. 38 M.R.S. § 484(3).

19. 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.

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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.
- 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,

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- 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, 15, and 18 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.
 - G. 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 further project modification or conditions regarding the transmission line's location, character, width, or appearance, beyond what is required by this Order, are warranted, under 38 M.R.S. § 487-A(4) or otherwise, to lessen the transmission line's impact on the environment or risk to public health or safety.

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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, unless the Department determines that said invalidity or unenforceability results in a project that would violate applicable statutory or regulatory standards, in which case the applicant shall file an application to modify the license to ensure full compliance. 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, 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.
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.
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.
8. Prior to the start of construction, the applicant shall conserve 717 acres of land within the Upper Kennebec River DWA.

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9. Prior to the start of construction, the applicant shall contribute:
 - a. A total of \$877,010.06 in In-Lieu-Fee payments to the Department for the Maine Natural Resource Conservation Program for impacts to SVPs (\$623,657.53) 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).
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.
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.
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.
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.
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.
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.
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.

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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.
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.
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.
20. The applicant shall limit construction activities in mapped habitat for Rusty Black Birds to between July 1 and April 19 (prohibiting construction between April 20 and June 30) in any calendar year.
21. The applicant shall maintain 10-15-foot tall spruce/fir vegetation in the mapped Rusty Black Bird habitat.
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.
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.
24. The applicant shall mark the location of all natural resource buffers with flagging prior to the start of construction.
25. The applicant shall permanently mark all natural resource buffers upon completion of construction.
26. The applicant shall mark all natural resource buffers with flagging prior to any maintenance activities.
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.

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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.
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).
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).
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.
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).
33. The applicant shall install shorter poles along Moxie Pond (structures #3006-529 and #3006-458).
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.
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.
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.
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.
38. The applicant shall implement the plans for site avoidance and treatments described in the final Phase I archaeological survey report.

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39. Within 18 months of the date of this Order, the applicant shall develop and submit to the Department for review and approval a Conservation Plan, consistent with Section 7(D)(2)(a)(3), to permanently conserve 40,000 acres in the vicinity of Segment 1. Prior to commercial operation of the project, the applicant must fully implement the approved Conservation Plan, unless, upon a showing by the applicant that it has made reasonable, good faith efforts to implement the Conservation Plan and addition time, not more than four years from the date of this Order, is needed, the Department approves an extension of the implementation deadline. Prior to implementation, all forest management plans, and all conservation easements, deed restrictions, covenants, or other legal instruments designed to fulfill the objectives of the Conservation Plan, must be submitted to the Department for review and approval.

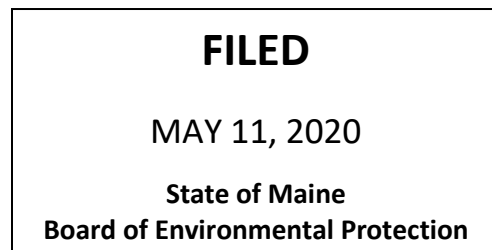
THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 11th DAY OF MAY, 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



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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.
- I. 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

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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. Approval of Variations From Plans. 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. 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. Erosion Control. 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. Compliance With Conditions. 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. Time frame for approvals. 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. No Construction Equipment Below High Water. 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. Permit Included In Contract Bids. 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.

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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

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- 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)

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Special Condition
for
Third Party Inspection Program

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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,
- 4) 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.

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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.
- 6) 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.

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- 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.

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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: <i>PM, Maine DEP (@maine.gov)</i>	FROM:
PROJECT NAME/ LOCATION:	DEP #:
DATE OF INSPECTION:	DATE OF REPORT:
WEATHER:	CONDITIONS:

SITE CHARACTERISTICS:

# ACRES OPEN:	# ACRES ACTIVE:	# ACRES INACTIVE:
LOCATION OF OPEN LAND:	LOCATION OF ACTIVE LAND:	LOCATION OF INACTIVE LAND:
OPEN SINCE:	OPEN SINCE:	OPEN SINCE:

PROGRESS OF WORK:

INSPECTION OF:	Satisfactory	Minor Deviation (corrective action required)	Unsatisfactory (include photos)
STORMWATER CONTROL (VEGETATIVE & STRUCTURAL BMP'S)			
EROSION & SEDIMENTATION CONTROL (TEMPORARY & PERMANENT BMP'S)			
OTHER: (PERMIT CONDITIONS, ENGINEERING DESIGN, ETC.)			

COMMENTS/CORRECTIVE ACTIONS TAKEN (attach additional sheets as necessary):

Photos (must be labeled with date, photographer and location):

Cc:		
<i>Original and all copies were sent by email only.</i>		

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Appendix A
List of Municipal and County Governments

Town	County	Senate District	House District	Congressional District
City of Auburn 60 Court Street Auburn, Maine 04210 Phone (207) 333-6600 pcrichton@auburnmaine.gov	Androscoggin County Commissioners' Office 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincounty.maine.gov	Senate District 20 Senator Eric L. Brakey 146 Pleasant Street Auburn, ME 04210 Phone (207) 406-0897 Eric.brakey@legislature.maine.gov	House District 62 Rep. Gina M. Melaragno 25 James Street, Apt. 3 Auburn, Maine 04210 Phone (207)740-8860 gina.melaragno@legislature.maine.gov 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@legislature.maine.gov	Congressional District 2 Representative Bruce Poliquin 179 Lisbon Street Lewiston, ME 04240 Phone (207) 784-0768
City of Lewiston 27 Pine Street Lewiston, Maine 4240-7204 Phone (207) 513-3000 ebarrett@lewistonmaine.gov	Androscoggin County Commissioners' Office 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801	Senate District 21 Senator Nate Libby 44 Robinson Gardens Lewiston, ME 04240 Phone (207)713-8449 nathan.libby@legislature.maine.gov	House District 58 Rep. James R. Handy 9 Maplewood Road Lewiston, Maine 04240 Phone (207) 784-5595 jim.handy@legislature.maine.gov	2

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

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<p>Phone (207) 696-3979</p>	<p>Skowhegan, ME 04976 Phone (207) 474-9861 ddibiasi@SomersetCounty-ME.org</p>	<p>Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislature.maine.gov</p>	<p>Weld, Maine 04285 Phone (207) 585-2638 thomas.skolfield@legislature.maine.gov</p>	
<p>Town of Caratunk Elizabeth Caruso - 1st Select PO Box 180 Caratunk, Maine 04925-0180 OFFICE PHONE: 672-3030</p>	<p>Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 Phone (207) 474-9861 ddibiasi@SomersetCounty-ME.org</p>	<p>Senate District 3 Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislature.maine.gov</p>	<p>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</p>	<p>2</p>
<p>Town of Chesterville 409 Dutch Gap Road Chesterville, Maine 04938 Phone (207) 778-2433 chesterville.me@gmail.com</p>	<p>Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@franklincountymaine.gov</p>	<p>Senate District 17 Senator Thomas Saviello 60 Applegate Lane Wilton, ME 042924 Phone (207) 287-1505 thomas.saviello@legislature.maine.gov</p>	<p>House District 114 Rep. Russell J. Black 123 Black Road Wilton, Maine 04294 Phone (207) 491-4667 russell.black@legislature.maine.gov</p>	<p>2</p>
<p>Town of Cumberland William R. Shane, Town Manager 290 Tuttle Road Cumberland, Maine 04021 Phone (207) 829-5559</p>	<p>Cumberland County Commissioners Office James Gailey, County Manager 142 Federal Street Portland, ME 04101 Phone (207) 871-8380 gailey@cumberlandcounty.org</p>	<p>Senate District 25 Senator Catherine Breen 15 Falmouth Ridges Drive Falmouth, Maine 04105 Phone (207) 329-6142 Cathy.breen@legislature.maine.gov</p>	<p>House District 45 Rep. Dale J. Denno 275 Main Street Cumberland Center, Maine 04021 Cell Phone (207) 400-1123 dale.denno@legislature.maine.gov</p>	<p>1 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</p>

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

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<p>Town of Jay 340 Main Street Jay, Maine 04239 Phone (207) 897-6785 joffice@jay-maine.org</p>	<p>Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@franklincountymaine.gov</p>	<p>Senate District 17 Senator Thomas Saviello 60 Applegate Lane Wilton, ME 042924 Phone (207) 287-1505 thomas.saviello@legislature.maine.gov</p>	<p>House District 74 Rep. Christina Riley 437 Main Street Jay, Maine 04239 Phone (207)897-2288 tina.riley@legislature.maine.gov</p>	<p>2</p>
<p>Town of Leeds 8 Community Drive Leeds, Maine 04263 Phone (207) 524-5171 townofleeds@fairpoint.net</p>	<p>Androscoggin County Commissioners' Office 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincountymaine.gov</p>	<p>Senate District 22 Senator Garrett Mason PO Box 395 Lisbon Falls, Maine 04252 Phone (207) 557-1521 garret.mason@legislature.maine.gov</p>	<p>House District 75 Rep. Jeffrey L. Timberlake 284 Ricker Hill Road Turner, Maine 07282 Cell Phone (207)754-6000 jeffrey.timberlake@legislature.maine.gov</p>	<p>2</p>
<p>Town of Livermore Falls 2 Main Street Livermore Falls, Maine 04254 Phone (207) 897-3321 townoffice@lfme.org</p>	<p>Androscoggin County Commissioners' Office 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincountymaine.gov</p>	<p>Senate District 18 Senator Lisa Keim 1505 Main Street Dixfield, ME 04224 Phone (207) 562-6023 Lisa.keim@legislature.maine.gov</p>	<p>House District 74 Rep. Christina Riley 437 Main Street Jay, Maine 04239 Phone (207)897-2288 tina.riley@legislature.maine.gov</p>	<p>2</p>
<p>Town of Moscow 110 Canada Road Moscow, Maine 04920 Phone (207) 672-4834 moscow@myfairpoint.net</p>	<p>Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 Phone (207) 474-9861 ddibiasi@SomersetCounty-ME.org</p>	<p>Senate District 3 Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislature.maine.gov</p>	<p>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</p>	<p>2</p>
<p>Town of New Gloucester 385 Intervale Road New Gloucester, Maine 04260 Phone (207) 926-4126 ccastonguay@newgloucester.com</p>	<p>Cumberland County Commissioners Office James Gailey, County Manager 142 Federal Street Portland, ME 04101 Phone (207) 871-8380</p>	<p>Senate District 20 Senator Eric L. Brakey 146 Pleasant Street Auburn, ME 04210 Phone (207) 406-0897 Eric.brakey@legislature.maine.gov</p>	<p>House District 65 Rep. Ellie Espling 12 Lewiston Rd New Gloucester, Maine 04260 Cell Phone (207) 891-8280 ellie.espling@legislature.maine.gov</p>	<p>1</p>

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	gailey@cumberlandcounty.org			
Town of New Sharon 11 School Lane, PO Box 7 New Sharon, Maine 04955-0007 Phone (207) 778-4046 townclerk@newsharon.maine.gov	Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@franklincountymaine.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 Pownal 429 Hollowell Road Pownal, Maine 04069 Phone (207) 688-4611	Cumberland County Commissioners Office James Gailey, County Manager 142 Federal Street Portland, ME 04101 Phone (207) 871-8380 gailey@cumberlandcounty.org	Senate District 24 Senator Brownie Carson PO Box 68 Harpwell, Maine 04079 Phone (207) 751-9076 Brownie.carson@legislature.maine.gov	House District 46 Rep. Paul B. Chace 31 Colonial Drive Durham, Maine 04222 Phone (207) 240-9300 Paul.chace@legislature.maine.gov House District 48 Rep. Sara Gideon 37 South Freeport Road Freeport, Maine 40032 Phone (207) 287-1300 sara.gideon@legislature.maine.gov	2
Town of Starks 57 Anson Road Starks, Maine 04911 Phone (207) 696-8069 townofstarks@gmail.com	Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 Phone (207) 474-9861 ddibiasi@SomersetCounty-ME.org	Senate District 3 Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 Phone (207) 474-6703 Rodney.Whittemore@legislature.maine.gov	House District 112 Rep. Thomas H. Skolfield 349 Phillips Road Weld, Maine 04285 Phone (207) 585-2638 thomas.skolfield@legislature.maine.gov	2
Town of Whitefield 36 Townhouse Road Whitefield, Maine 04353 Phone (207) 549-5175 whitefield@roadrunner.com	Lincoln County Commissioners Office 32 High Street, P.O. Box 249 Wiscasset, Maine 04578	Senate District 13 Senator Dana Dow 30 Kalers Pond Road Waldoboro, Maine 04572 Phone (207) 832-4658	House District 88 Rep. Deborah J. Sanderson 64 Whittier Drive Chelsea, Maine 04330 Phone (207) 376-7515	1

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	Phone (207) 882-6311 ckipfer@lincounty.me	dana.dow@legislature.maine.gov	deborah.sanderson@legislature.maine.gov	
Town of Wilton 158 Weld Road Wilton, Maine 04294 Phone (207) 645-4961 office@wiltonmaine.org	Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@franklincountymaine.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 Windsor 523 Ridge Road, PO Box 179 Windsor, Maine 04363-0179 Phone (207) 445-2998 FAX: 445-3762	Kennebec County Commissioner's Office 125 State Street, 2nd Floor Augusta, Maine 04330 Phone: (207) 622-0971	Senate District 13 Senator Dana Dow 30 Kalers Pond Road Waldoboro, Maine 04572 Phone (207) 832-4658 dana.dow@legislature.maine.gov	House District 80 Rep. Richard T. Bradstreet 44 Harmony Lane Vassalboro, Maine 04989 Cell Phone (207)861-1657 dick.bradstreet@legislature.maine.gov	1
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**Appendix B
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¹ These Intervenors are represented by Elizabeth Beopple, Esq., BCM Environmental & Land Law, PLLC.

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¹ These Intervenor are represented by Elizabeth Boepple, Esq., BCM Environmental & Land Law, PLLC.

² These Intervenor 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.

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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.

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Table C-1

Area Name	From Structure	To Structure	Location	Min. Veg Height	Notes	Approximate Length (miles)
Wildlife Area 1	3006-800	3006-799	Beattie Twp	35'	Includes Number One Brook not visible from Beattie Pond	0.22
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 Appleton Twp	35'	Includes five perennial streams and four intermittent streams	1.25
Wildlife Area 4	3006-742	3006-731	Appleton Twp	35' (except full canopy height at Gold Brook crossing)	Includes Gold Brook crossing (structures 3006-735 to 3006-732) and Roaring Brook 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	Hobbs town 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	35'	Cold Stream crossing; adjacent to Cold Stream Forest Tract	0.23
Wildlife Area 8	3006-589	3006-588	Johnson Mtn Twp	35'	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	35'	Includes Tomhegan Stream crossing and adjacent to Cold Stream Forest Tract	2.21
Wildlife Area 10	3006-542	3006-541	Moxie Gore	35'	Moxie Stream crossing where 35-foot vegetation likely can be maintained without taller poles	0.19

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Area Name	From Structure	To Structure	Location	Min. Veg Height	Notes	Approximate Length (miles)
Wildlife Area 11	Eastern edge of clearing for the HDD Termination Station in West Forks	Western edge of clearing for the HDD Termination Station in Moxie Gore	West Forks Moxie Gore	Full canopy height	Upper Kennebec River crossing; deer travel corridors 9 and 10	0.56
Wildlife Area 12						
	3006-548		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.

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:

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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

How the vegetation within the tapered areas along Segment 1 is managed will influence the environmental benefit of this form of mitigation. Reasonable steps will be taken to manage the vegetation to ensure tapering minimizes the environmental impact of the corridor to the greatest extent practicable, including reasonable efforts to avoid the growth of even-aged stands within each taper.

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,⁴⁵ 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,⁴⁶ 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

⁴⁵ 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.

⁴⁶ Additionally, no herbicide will be used in the Segment 1 corridor.

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 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 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.

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Appendix D Sound Level Requirements

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

Sound Level Requirement		Source
Merrill Road Converter Station		
Reactor/Valve Building (1) Transformers (4) Radiators (10)	66 dBA (SPL) at 3 feet 90 dBA (SWL) per transformer 80 dBA (SWL) per radiator	Site Law Application, Table 5-8
Larrabee Road Substation		
New Autotransformer (3)	82 dBA (SPL) at 3 feet	Site Law Application, Table 5-11
Fickett Road Substation		
Transformer (2) Air Core Reactor – D1 (3) Air Core Reactor – CA1 (3) Capacitor Bank (3) Dry Air Cooler (5) HVAC Fans (2)	91 dBA (SWL) 74 dBA (SWL) 64 dBA (SWL) 71 dBA (SWL) 80 dBA (SWL) 80 dBA (SWL)	Site Law Application, Table 5-15
Coopers Mills Substation		
Transformer (2) Air Core Reactor – D1 (3) Air Core Reactor – CA1 (3) Capacitor Bank (3) Dry Air Cooler (5) HVAC Fans (2)	91 dBA (SWL) 74 dBA (SWL) 64 dBA (SWL) 71 dBA (SWL) 80 dBA (SWL) 80 dBA (SWL)	Site Law Application, Table 5-19
Raven Farm Substation		
Transformer	75 dBA at 6 feet	Raven Farm Substation Sound Study (5/17/18), Table 6-1

Notes:

SPL – Sound Pressure Level, averaged along acoustical envelope

SWL – Sound Power Level

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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	3 7
1	Bradstreet Twp	ISTR-24-01	Trib. to Bitter Brook	2	INT	N	N/A	435	Y	5 6
1	Johnson Mountain Twp	ISTR-39-01	Trib. to Cold Stream	4	INT	N	Y	220	N	8 9
1	Johnson Mountain Twp	ISTR-39-03	Trib. to East Branch Salmon Stream	4	INT	N	N/A	274	N	8 8
1	Johnson Mountain Twp	ISTR-42-09	Trib. to Tomhegan Stream	5	INT	N	Y	133	N	9 4
1	West Forks Plt	ISTR-45-02-02	Trib. to Tomhegan Stream	3	INT	N	Y	317	N	10 0
1	West Forks Plt	ISTR-46-05	Trib. to Cold Stream	4	INT	N	Y	43	N	10 3
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	11 1
1	Moxie Gore	ISTR-51-07	Trib. to Moxie Stream	2	INT	N	N/A	269	N	11 4
1	Moxie Gore	ISTR-51-15	Trib. to Moxie Stream	1.5	INT	N	N/A	353	N	11 5

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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-51-16	Trib. to Moxie Stream	3	INT	N	N/A	320	N	11 5
1	The Forks Plt	ISTR-52-07	Trib. to Moxie Stream	3	INT	N	N/A	394	N	11 6
1	Moxie Gore/The Forks Plt	ISTR-52-08	Trib. to Moxie Stream	1	INT	N	N/A	227	N	11 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
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

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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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-4

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-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	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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-6

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 Mountain Brook	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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-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	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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-8

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-9

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-10

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-11

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-12

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/Hobbstown Twp	ISTR-18-11	Trib. to Fish Pond	3	INT	N	N/A	405	N	42

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-13

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-14

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-15

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)	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 Pl	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/Hobbs town Twp	PSTR-18-06	Trib. to Fish Pond	4	PER	N	Y	527	150	N	42

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-16

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/Hobbstown Twp	PSTR-18-05	Trib. to Fish Pond	5	PER	N	Y	421	Y	42

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-17

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-18

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-19

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/Hobbstown 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/Hobbstown Twp	PSTR-21-04	Little Spencer Stream	25	PER	N	Y	358	N	48

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-20

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-21

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 Pkt	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 Pkt	ISTR-53-01	Trib. to Moxie Pond	2	INT	N	N/A	59	N	119
2	The Forks Pkt	ISTR-55-02	Trib. to Moxie Pond	2	INT	N	N/A	274	N	123
2	The Forks Pkt	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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-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
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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-23

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-24

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-25

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-26

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 Androscoggin 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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-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
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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-28

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-29

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-30

Segment	Town	Feature ID	Stream Name ¹	Ave. Stream Width (ft) ²	Stream Type (PER/ INT) ³	Atlantic Salmon Habitat (Y/N) ⁵	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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-31

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-32

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-33

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 Carrabasset River	5.5	UNK	N	Y	373	N	198
3	Anson	ISTR-90-04	Trib. to Carrabasset River	1.5	UNK	Y	N/A	165	N	200
3	Anson	ISTR-92-01	Trib. to Carrabasset River	2	INT	Y	N/A	332	N	204
3	Anson	ISTR-92-02	Trib. to Carrabasset 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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-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
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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-35

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 Androscoggin River	2	INT	N	N/A	196	N	283
3	Livermore Falls	ISTR-128-03	Trib. to Androscoggin 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 Androscoggin River	2	PER	N	N/A	303	N	276

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-36

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 Androscoggin River	2	UNK	N	N/A	244	N	277
3	Livermore Falls	ISTR-126-06	Trib. to Androscoggin 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 Androscoggin River	3	INT	N	N/A	279	N	274
3	Livermore Falls	ISTR-124-02	Trib. to Androscoggin River	3	INT	N	N/A	459	N	274
3	Livermore Falls	ISTR-126-01	Trib. to Androscoggin 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 Androscoggin River	3	INT	N	N/A	58	N	287

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-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
3	Leeds	ISTR-130-03	Trib. to Androscoggin 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 Androscoggin 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 Androscoggin River	2	INT	N	N/A	295	Y	277
3	Livermore Falls	ISTR-125-05	Trib. to Androscoggin 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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-38

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 Androscoggin River	4	PER	N	N/A	333	N	279
3	Livermore Falls	PSTR-126-05	Trib. to Androscoggin 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/Redwater Brook	5	PER	N	N/A	60	N	270, 271
3	Livermore Falls	PSTR-126-03	Trib. to Androscoggin River	5	PER	N	N/A	141	N	280

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-39

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 Androscoggin River	2	PER	N	N/A	419	N	323
3	Lewiston	PSTR-146-05	Trib. to Androscoggin 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 Androscoggin 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 Androscoggin 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 Androscoggin River	2	PER	N	N/A	42	N	277, 278
3	Livermore Falls	PSTR-125-04	Trib. to Androscoggin 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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-40

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 Androscoggin River	3	UNK	Y	N/A	120	N	340
4	Durham	ISTR-156-02	Trib. to Androscoggin 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 Androscoggin 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 Androscoggin River	2	PER	Y	N/A	211	N	345
4	Auburn	PSTR-156-03	Trib. to Androscoggin River	1	PER	Y	N/A	91	N	346
4	Auburn	PSTR-156-04	Trib. to Androscoggin River	2	PER	Y	N/A	165	Y	345
4	Auburn	PSTR-156-05	Trib. to Androscoggin River	2	PER	Y	N/A	90	N	346
4	Auburn	PSTR-156-06	Trib. to Androscoggin River	2	PER	Y	N/A	178	N	345
4	Auburn	PSTR-156-07	Trib. to Androscoggin River	2	PER	Y	N/A	85	N	346
4	Durham	PSTR-157-02	House Brook	2	PER	Y	N/A	105	Y	348

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-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
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	Androscoggin River	645	PER	Y	N/A	104	N	344

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-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
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/Montsweag Bay	3	INT	Y	N/A	15,281	N	359
5	Whitefield	PSTR-171-01	Trib. to Sheepscot River	40	PER	Y	Y	355	Y	397
5	Whitefield	PSTR-172-02	Trib. to Sheepscot 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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-43

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-44

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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
L-27625-VP-D-N/ L-27625-IW-E-N

E-45

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/ Monstweag Bay	1	INT	Y	N/A	10,413	N	361
5	Wiscasset	ISTR-187-16	Trib. to Back River/ Monstweag Bay	1	INT	Y	N/A	10,248	N	361
5	Wiscasset	ISTR-187-17	Trib. to Back River/ Monstweag Bay	1	INT	Y	N/A	10,265	N	361

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 L-27625-VP-D-N/ L-27625-IW-E-N

E-46

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/ Monstswear 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/ Monstswear Bay	2.5	INT	Y	N/A	10,710	N	361
5	Wiscasset	ISTR-188-05	Trib. to Back River/ Monstswear Bay	1	INT	Y	N/A	11,591	N	360
5	Wiscasset	ISTR-188-06	Trib. to Back River/ Monstswear 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/Woolwich	ISTR-186-06	Trib. to Montswear 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

L-27625-26-A-N/ L-27625-TG-B-N/ L-27625-2C-C-N
 L-27625-VP-D-N/ L-27625-IW-E-N

E-47

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

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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/ Monstweag Bay	2	INT	Y	N/A	14,492	N	359
5	Wiscasset	ISTR-188-03	Trib. to Back River/ Monstweag Bay	2	INT	Y	N/A	13,444	N	359, 360
5	Wiscasset	ISTR-188-07	Trib. to Back River/ Monstweag 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/ Montsweag Bay	3	INT	Y	N/A	15,388	N	359
5	Wiscasset	ISTR-188-08	Trib. to Back River/ Monstweag 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

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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/ Monstswag 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 Montswag Brook	9.5	PER	Y	N/A	559	N	365
5	Wiscasset/Woolwich	PSTR-186-08	Montswag Brook	17.5	PER	Y	N/A	1,219	N	365

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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:

- ¹ 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.
- ² Stream widths are based on field data collected by the applicant
- ³ Stream type is based on field work by the applicant.
- ⁴ Atlantic Salmon habitat is based on Maine Office of GIS data catalog. Edition 2016-03-21.
- ⁵ Brook trout habitat is based on information submitted by MDIFW on January 24, 2019

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Appendix F Compensation Requirements

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

Resource Type & Impact	Agency Requiring	Form of Compensation	Type and Amount of Compensation
47.638 acres of Temporary Wetland Fill	USACE	Preservation & In-Lieu Fee	Preservation of 56.97 acres of wetlands. \$154,369.29
105.252 acres of Permanent Cover Type Conversion of Forested Wetlands ¹	USACE & MDEP	Preservation	Preservation of three parcels, (Little Jimmie Pond, Flagstaff Lake, and Pooler Pond tracts) 440.29 acres of wetlands.
3.814 acres of Permanent Fill in Wetlands of Special Significance (WOSS) ²			
0.307 acres of Permanent Fill in Wetland (Non-WOSS)			
0.743 acres of Permanent Wetland Fill in SVP Habitat	MDEP	In-Lieu Fee	\$623,657.53
3.678 acres of Permanent Forested Wetland Conversion in SVP Habitat			
0.719 acres of Permanent Upland Fill in SVP Habitat			
27.572 acres of Permanent Upland Conversion in SVP Habitat			
Direct and Indirect Impact to USACE Jurisdictional Vernal Pools	USACE	In-Lieu Fee	\$2,015,269.01
0.003 acres of Permanent Wetland Fill in IWWH	MDEP	In-Lieu Fee	\$253,352.53
2.622 acres of Permanent Forested Wetland Conversion in IWWH			
0.014 acres of Permanent Upland Fill in IWWH			
12.387 acres of Permanent Upland Conversion in IWWH			
	In-Lieu Fee		\$3,046,648.37
	Land Preservation		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.

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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 riparian buffers	MDEP & MDIFW	Preservation	Three preservation parcels (Basin, Lower Enchanted, and Grand Falls tracts), totaling 1053.5 acres, containing 12.02 linear miles of stream
		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 40,000 acres in the vicinity of Segment 1
Total Additional Monetary Contribution			\$3,759,298.76
Total Additional Land Preservation/Conservation			41,770.5 Acres

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Appendix G
Table of Areas Requiring Additional Erosion Control Measures

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

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Appendix H
Land Use Planning Commission
Site Law Certification



**JANET T. MILLS
GOVERNOR**

**STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
LAND USE PLANNING COMMISSION
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022**

**AMANDA E. BEAL
COMMISSIONER
JUDY C. EAST
EXECUTIVE DIRECTOR**

**SITE LAW
CERTIFICATION**

**COMMISSION DETERMINATION
IN THE MATTER OF**

**REQUEST OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
FOR SITE LOCATION OF DEVELOPMENT LAW CERTIFICATION
CENTRAL MAINE POWER COMPANY
NEW ENGLAND CLEAN ENERGY CONNECT
SITE LAW CERTIFICATION SLC-9**

FINDINGS OF FACT AND DETERMINATION

The Maine Land Use Planning Commission (“Commission”), at a meeting of the Commission held on January 8, 2020, and after reviewing the request of the Maine Department of Environmental Protection (“Department”) for Site Location of Development Law (“Site Law”) Certification (“SLC”) SLC-9, supporting documents and other related materials on file, makes the following findings of fact and determination.

PROJECT DESCRIPTION AND LOCATION

Central Maine Power Company (“CMP”) proposes to construct the New England Clean Energy Connect Project (“proposed Project”), a high voltage direct current (“HVDC”) transmission line and related facilities to deliver electricity from Quebec, Canada to a new converter station in Lewiston, Maine. The proposed Project would include three main components: construction of a new transmission line corridor, expansion of an existing transmission line corridor, reconstruction of existing transmission lines within existing corridors, and rebuilding and upgrading substations.

The areas that would be involved in the proposed Project extend from Beattie Township at the Maine border with Quebec, Canada to Lewiston, Maine. The transmission line corridor and other components associated with the proposed Project would be located in the following townships, plantations, towns and municipalities:

- Franklin County townships: Beattie Township, Merrill Strip Township, Skinner Township;



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- Somerset County townships and plantations: Appleton Township, Bald Mountain Township, Bradstreet Township, Concord Township, Hobbstown Township, Johnson Mountain Township, Moxie Gore, Parlin Pond Township, The Forks Plantation, T5 R7 BKP WKR, West Forks Plantation; and
- Towns and municipalities: Alna, Anson, Auburn, Caratunk, Chesterville, Cumberland, Durham, Embden, Farmington, Greene, Industry, Jay, Leeds, Lewiston, Livermore Falls, Moscow, New Sharon, Pownal, Starks, Whitefield, Wilton, Windsor, Wiscasset, Woolwich.

The proposed Project is described by CMP in five segments. A project scope map showing the extent of each segment is included as **Appendix A** of this Site Law Certification.¹ Segment 1 would be approximately 53.5 miles in length and would begin in Beattie Township and end in Moxie Gore, entirely within townships and plantations served by the Commission. Segment 2 would be approximately 21.9 miles in length and would begin in The Forks Plantation and end in Moscow, within which The Forks Plantation and Bald Mountain Township are served by the Commission. Segment 3 would be approximately 71.5 miles in length and would begin in Concord Township and end in Lewiston, within which only Concord Township is served by the Commission. Segments 4 and 5 would be wholly within towns and municipalities not served by the Commission.

A new approximately 145.3-mile, 320-kilovolt HVDC transmission line would be constructed in Segments 1, 2, and 3. In Segment 1, the transmission line corridor would be 300 feet wide, is generally forested, and is not currently developed. A 150-foot wide portion of the Segment 1 corridor would be cleared of vegetation capable of growing into the conductor safety zone, as required by the National Electric Reliability Corporation.² In Segments 2 and 3, the proposed Project would be co-located with an existing transmission line and clearing of the corridor would be increased by 75 feet to accommodate the new line.

No new permanent roads would be constructed for portions of the proposed Project within the Commission's jurisdiction. Access to portions of the proposed Project within the Commission's jurisdiction in Segments 1, 2, and 3 would be over existing land management roads.³

CMP would utilize a backhoe to excavate holes to install transmission line structures. Placement of transmission line structures would disturb areas ranging from 30 square feet to 195 square feet, depending on the height of the transmission line structure required at a specific location and the size of the base needed to install each transmission line structure. Additional holes would be excavated to install guy wire anchors, as needed. Blasting may be required in some areas to achieve the

¹ Excerpts from CMP's Site Law application, exhibit 1-1, and September 18, 2019, Site Law application amendment.

² The North American Electric Reliability Corporation is a not-for-profit international regulatory authority whose mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid. The North American Electric Reliability Corporation develops and enforces reliability standards, including the management of vegetation to prevent encroachments into the Minimum Vegetation Clearance Distance of its transmission lines.

³ Access to Segments 1, 2, and 3 would be largely over privately-owned roads used for timber harvesting activities. Land management roads are used primarily for agricultural or forest management activities; however, some private landowners in the remote areas of Maine where the proposed Project would be located allow members of the public to utilize land management roads for recreation, hunting, fishing and other similar uses.

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necessary depth for the transmission line structures and guy wire anchor bases. Once a hole is dug to the proper depth, a crane would be used to place the pole in proper alignment.⁴

SCOPE OF COMMISSION’S REVIEW: ZONING, LAND USE STANDARDS, AND COMPREHENSIVE LAND USE PLAN

Pursuant to 12 M.R.S. § 685-B(1-A)(B-1), the Commission must determine whether the proposed Project is an allowed use within the subdistricts in which it is proposed and whether the proposed Project meets any land use standards established by the Commission that are not considered in the Department’s review under the Site Law.

a. Commission’s Zoning Subdistricts & Use Listings

Within the Commission’s jurisdictional area, there are three major zoning district classifications—management, protection, and development districts—which the Commission has further delineated into zoning subdistricts to protect important resources and prevent conflicts between incompatible uses. For each subdistrict, the Commission designated uses that are allowed without a permit, uses that are allowed without a permit subject to standards, uses that are allowed with a permit, uses that are allowed with a permit by special exception, and uses that are prohibited. The Commission’s zoning subdistricts are codified in the Commission’s Land Use Districts and Standards, 01-672 C.M.R. ch. 10 (“Chapter 10”).

The proposed Project would be located within the following subdistricts, listed in the Table 1 below. Because the proposed Project is a “utility facility” as that term is defined in Ch. 10, § 10.02(248), the table identifies the status of utility facilities within each listed subdistrict.

Table 1. Subdistricts in which the proposed Project is proposed and use listing status.

Subdistrict	Use Listing Status
General Development	Allowed with a permit
Residential Development	Allowed with a permit
General Management	Allowed with a permit
Flood Prone Protection	Allowed with a permit
Fish and Wildlife Protection	Allowed with a permit
Great Pond Protection	Allowed with a permit
Shoreland Protection	Allowed with a permit
Recreation Protection	Allowed with a permit by special exception
Wetland Protection	Allowed with a permit by special exception

⁴ Additional details regarding proposed construction plans are found in CMP’s Natural Resources Protection Act application, section 7.0. The proposed Project would include other components that are either exempt from Site Law review by the Department or that are otherwise not proposed within the Commission’s jurisdiction. Additional information regarding these components is provided in CMP’s Site Law permit application.

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b. Land Use Standards

The Commission's land use standards are codified in Ch. 10, §§ 10.24 – 10.27, and are grouped into three categories: development standards, dimensional requirements, and activity-specific standards.⁵ The Commission's role in certifying the proposed Project to the Department is limited to reviewing development standards that are not duplicative of the Department's review pursuant to the Site Law. 12 M.R.S. § 685-B(1-A)(B-1). Applicable statutory criteria⁶ and review standards that are not duplicative of the Department's review are:

- a. Vehicular Circulation, Access and Parking – Ch. 10, §§ 10.24(B) and 10.25(D);
- b. Conformance with Chapter 10 and the regulations, standards and plans adopted pursuant to Ch. 10 – Ch. 10, § 10.24(E);
- c. Subdivision and Lot Creation – Ch. 10, §§ 10.24(F) and 10.25(Q);
- d. Public's Health, Safety and General Welfare – Ch. 10, § 10.24
- e. Lighting – Ch. 10, § 10.25(F);
- f. Activities in Flood Prone Areas – Ch. 10, § 10.25(T);
- g. Dimensional Standards – Ch. 10, § 10.26(D) and (F);
- h. Vegetative Clearing – Ch. 10, § 10.27(B);
- i. Pesticide Application – Ch. 10, § 10.27(I); and
- j. Signs – Ch. 10, § 10.27(J).

c. Comprehensive Land Use Plan

Pursuant to 12 M.R.S. § 685-C(1), the Commission has a Comprehensive Land Use Plan that guides the Commission in developing specific land use standards, delineating district boundaries, siting development, and generally fulfilling the purposes of the Commission's governing statute. If approving applications submitted to it pursuant to 12 M.R.S. § 685-A(10) and § 685-B, the Commission may impose such reasonable terms and conditions as the Commission considers appropriate to satisfy the criteria of approval and purpose set forth in these statutes, rules, and the Comprehensive Land Use Plan.⁷

⁵ Ch. 10, subchapter III.

⁶ The criteria for approval set forth at 12 M.R.S. § 685-B(4) are restated in Chapter 10, § 10.24.

⁷ Ch. 10, § 10.24.

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PROCEDURAL BACKGROUND

On March 31, 2017, Massachusetts Electric Distribution Companies, in coordination with the Massachusetts Department of Energy Resources, issued a Request for Proposal for Long-Term Contracts for Clean Energy Projects (“Massachusetts RFP”).

On July 27, 2017, CMP and Hydro Renewable Energy, Inc., an affiliate of Hydro Quebec, submitted to Massachusetts Electric Distribution Companies a joint bid proposal, *New England Clean Energy Connect: 100% Hydro*, in response to the Massachusetts RFP.

On September 27, 2017, CMP submitted to the Department an application for a Natural Resources Protection Act (“NRPA”) permit pursuant to 38 M.R.S. §§ 480-A – 480-JJ and a Site Law permit pursuant to 38 M.R.S. §§ 481 – 490 for its proposed Project.

On October 12, 2017, the Department submitted to the Commission a Request for Certification for CMP’s proposed Project.

On October 13, 2017, the Commission provided the Department with a Completeness Determination in which staff determined that there was sufficient information to begin the review of the certification request pursuant to 12 M.R.S. § 685-B(1-A)(B-1), and the Department accepted the applications as complete for processing.

On November 17, 2017, the Commissioner of the Department decided that the Department would hold a public hearing on CMP’s NRPA and Site Law permit applications. On June 27, 2018, the Department provided notice of the opportunity to intervene in its hearing.

On December 11, 2017, the Appalachian Mountain Club, Maine Audubon, and the Natural Resources Council of Maine, in a joint letter to the Commission, filed a request for a hearing on the allowed use determination portion of the Commission’s certification of the proposed Project.

On December 19, 2017, the Commission voted to hold a public hearing limited to whether the proposed Project is an allowed use within the Recreation Protection (“P-RR”) subdistricts. On March 28, 2018, Massachusetts Electric Distribution Companies selected the proposed Project as the winning bid in the Massachusetts RFP.

On July 12, 2018, the Commission provided notice of the public hearing and opportunity to intervene.

To facilitate efficient review and avoid the need for duplicative testimony by the same parties and interested members of the public in different proceedings, the Commission decided to hold its public hearing jointly with the Department.

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Through its First Procedural Order, the Commission granted intervenor status to the 30 petitioners identified in Table 2 below. Additionally, the Commission allowed the Office of the Public Advocate to participate as a governmental agency, which, pursuant to Chapter 5 § 5.15, has all the rights of an intervenor.

Table 2. Persons and entities granted leave to intervene.

Hawk's Nest Lodge	Taylor Walker
Kennebec River Angler	Tony DiBlasi
Kingfisher River Guides	Edwin Buzzell
Maine Guide Service, LLC	Appalachian Mountain Club
Mike Pilsbury	Natural Resources Council of Maine
Alison Quick	Trout Unlimited
Carrie Carpenter	City of Lewiston
Courtney Fraley	Town of Caratunk
Eric Sherman	Wagner Forest Management
Kathy Barkley	NextEra Energy Resources, LLC
Kim Lyman	Western Mountains & Rivers Corp.
Linda Lee	International Brotherhood of Electrical Workers
Mandy Farrar	Industrial Energy Consumer Group
Matt Wagner	Lewiston Auburn Metropolitan Chamber of Commerce
Noah Hale	Maine State Chamber of Commerce

The Presiding Officer consolidated the following twelve intervenors: 1) Alison Quick, 2) Carrie Carpenter, 3) Courtney Fraley, 4) Eric Sherman, 5) Kathy Barkley, 6) Kim Lyman, 7) Linda Lee, 8) Mandy Farrar, 9) Matt Wagner, 10) Noah Hale, 11) Taylor Walker, and 12) Tony DiBlasi. This group is referred to as the "Local Residents and Recreational Users" in Intervenor Group 10 (see next paragraph).

The Department's and the Commission's Presiding Officers further consolidated the Intervenor groups into the following ten (10) intervenor groups.

- Group 1: Friends of Boundary Mountains*; Maine Wilderness Guides*; Old Canada Road*
- Group 2: West Forks Plantation*; Town of Caratunk**; Kennebec River Anglers**; Maine Guide Services**; Hawk's Nest Lodge**; Mike Pilsbury**
- Group 3: International Energy Consumer Group**; City of Lewiston**; International Brotherhood of Electrical Workers**; Maine Chamber of Commerce**;
Lewiston/Auburn Chamber of Commerce***

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- Group 4: Natural Resources Council of Maine^{**}; Appalachian Mountain Club^{**}; Trout Unlimited^{**}
- Group 5: Brookfield Energy^{*}; Wagner Forest^{**}
- Group 6: The Nature Conservancy^{*}; Conservation Law Foundation^{*}
- Group 7: Western Mountains and Rivers Corporation^{**}
- Group 8: NextEra^{**}
- Group 9: Office of the Public Advocate^{*}
- Group 10: Edwin Buzzell^{**}; Local Residents and Recreational Users^{***}

Note:

- * indicates: Intervenors with the Department only
 ** indicates: Intervenors with the Department and the Commission
 *** indicates: Intervenors with the Commission only

After receiving input from the parties, the Department's and the Commission's Presiding Officers selected the following hearing topics:

- a. Scenic Character and Existing Uses;
- b. Wildlife Habitat and Fisheries;
- c. Alternatives Analysis; and
- d. Compensation and Mitigation.

The Commission required pre-filing of all direct and rebuttal testimony in advance of the hearing. On April 1-5, 2019, in Farmington, and on May 9, 2019, in Bangor, the Department held a public hearing on CMP's proposed Project. On April 2, 2019, and May 9, 2019, only, the hearing was held jointly with the Commission. The hearing included both daytime and evening sessions. Participation in the daytime sessions was limited to the parties. The evening sessions, held on April 2, 2019, for the Commission and the Department jointly, and April 4, 2019, for the Department only, were devoted to receiving testimony from members of the public. The Commission allowed the submission of post-hearing briefs, proposed findings of fact, and reply briefs following the hearing. The Commission and the Department concluded the hearing in this matter on May 9, 2019. The record remained open until May 31, 2019, for the parties to submit limited additional evidence and responses. The Commission's hearing record closed on May 31, 2019.

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The opportunity for public comment on the proposed Project began with receipt of the request for certification on October 12, 2017. In October 2017, the Commission created a webpage for the proposed Project on which pertinent information regarding the Commission's certification process was posted.⁸ A GovDelivery distribution list specific to the proposed Project was created by the Commission in October 2017 to provide updates on the proposed Project.⁹ Any interested person was provided the option to enter their email address to receive updates regarding the proposed Project. The Commission received approximately 300 written comments from members of the public, municipalities, plantations, and townships regarding the proposed Project. Additionally, the Commission received written and oral testimony from dozens of members of the public at the public hearing on April 2, 2019. Following the conclusion of the hearing, the Presiding Officers held open the opportunity for public comment until May 20, 2019, then until May 28, 2019, to allow the public to file statements in rebuttal of those written statements filed by May 20, as required by Commission rule Chapter 5.

On September 11, 2019, the Commission conducted a deliberative session to consider a draft Site Law Certification decision document. The Commission did not vote or make any decisions regarding the draft decision document at the September meeting.

On September 18, 2019, CMP submitted to the Department and the Commission a petition to reopen the record with attachments that describe an amendment to the Site Law and NRPA applications pertaining to the originally proposed route in the area near Beattie Pond. On October 3, 2019, the Presiding Officers of the Department and the Commission reopened the record for the purpose of allowing CMP to amend its Site Law and NRPA applications and to gather additional evidence needed to evaluate the proposed alternative route outside of the P-RR subdistrict at Beattie Pond. Intervenors were permitted to submit evidence and comments pertaining to the amendment until November 12, 2019. CMP was permitted to submit evidence and comments responsive to the Intervenors' submissions until November 26, 2019. The general public was permitted to submit evidence and comments until November 26, 2019.

ALLOWED USE DETERMINATION: SPECIAL EXCEPTION REVIEW CRITERIA

As set forth in Table 1 above, a utility facility is a use allowed with a permit within all subdistricts in which it is proposed, except in the P-RR and Wetland Protection ("P-WL") subdistricts. Within the P-RR and P-WL subdistricts, a utility facility is allowed with a permit by special exception. For the Commission to find that a use is allowed by special exception in both the P-RR and P-WL subdistricts, pursuant to Ch. 10, §§ 10.23(I)(3)(d) and 10.23(N)(3)(d) respectively, an applicant must show by substantial evidence that:

- a. there is no alternative site which is both suitable to the proposed use and reasonably available to the applicant;

⁸ https://www.maine.gov/dacf/lupc/projects/site_law_certification/slc9.html (last accessed December 30, 2019).

⁹ GovDelivery is a Maine government subscription service allowing citizens to sign up for free text and email updates about topics relevant to the subscriber.

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- b. the use can be buffered from those other uses and resources within the subdistrict with which it is incompatible; and
- c. such other conditions are met that the Commission may reasonably impose in accordance with the policies of the Comprehensive Land Use Plan.

The proposed Project would cross or traverse two separate P-RR subdistricts: 1) where the proposed Project would cross the Kennebec River in West Forks Plantation and Moxie Gore; and 2) at a proposed crossing of the Appalachian Trail in Bald Mountain Township. The proposed Project crosses P-WL subdistricts in numerous locations throughout Segments 1, 2, and 3.¹⁰

The purpose of the P-RR subdistrict is to provide protection from development and intensive recreational uses to those areas that currently support, or have opportunities for, unusually significant primitive recreation activities. By so doing, the natural environment that is essential to the primitive recreational experience will be conserved. Ch. 10, § 10.23(I). The purpose of the P-WL subdistrict is to conserve coastal and freshwater wetlands in essentially their natural state because of the indispensable biologic, hydrologic and environmental functions which they perform. Ch. 10, § 10.23(N).

SPECIAL EXCEPTION ALTERNATIVES ANALYSIS

The Commission considers alternatives analysis information to determine whether a proposed activity is an allowed use by special exception within P-RR and P-WL subdistricts.¹¹ Although the Commission's role does not include evaluation of alternatives outside the P-RR and P-WL subdistricts, an understanding of CMP's overall alternatives analyses for siting the proposed Project is necessary context for the Commission's evaluation of the P-RR and P-WL special exception criteria.¹²

¹⁰ CMP's initial proposal was to cross or traverse three separate P-RR subdistricts: 1) where the proposed Project would cross the Kennebec River; 2) adjacent to Beattie Pond in Beattie Township, Lowelltown Township, Skinner Township, and Merrill Strip Township; and 3) at a proposed crossing of the Appalachian Trail. CMP's September 2019 application amendment revised the route of the proposed Project to avoid the P-RR subdistrict at Beattie Pond. As a result, no portion of the revised proposed Project route is within the Beattie Pond P-RR subdistrict or within Lowelltown Township.

¹¹ The Department requires a broader alternatives analysis as part of its review under the NRPA that addresses avoidance and minimization of impacts to protected natural resources over the entire proposed Project, including impacts to protected natural resources within the Commission's jurisdiction.

¹² CMP's complete alternatives analysis is provided in section 2.0 of its NRPA permit application with the Department. Alternatives analyses pertaining to the P-RR and P-WL subdistricts are discussed in section 25 of CMP's Site Law permit application as well as in its hearing testimony before the Commission.

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a. Alternative Routes for Transmission Line Corridor: Above Ground Alternatives

CMP analyzed three HVDC transmission line alternative routes when designing the proposed Project, each of which it stated would meet the project purpose of delivering energy generation from Québec to the New England Control Area.¹³ In doing so, CMP specifically evaluated alternatives that would avoid the P-RR subdistricts. The three routes CMP evaluated are the Preferred Route, which is the route selected by CMP for its proposed Project for which it seeks permits; Alternative 1; and Alternative 2. Alternative 1 would require a new and additional crossing of the Appalachian Trail, would require acquisition of lands held in conservation, would include 93 miles of new corridor as compared to the Preferred Route distance of 53.5 miles, and would require more landowner acquisitions. Alternative 2 would also require a new crossing of the Appalachian Trail, the acquisitions of land in the 36,000-acre Bigelow Preserve and from the Penobscot Indian Nation, contains more wetland and stream crossings than the Preferred Alternative, and requires more landowner acquisitions than the Preferred Alternative.

CMP considered the following in conducting its evaluation of alternatives: conserved lands, undeveloped right-of-way, amount of clearing required, number of stream crossings, transmission line length, National Wetlands Inventory mapped wetlands, deer wintering areas, inland waterfowl and wading bird habitat, public water supplies, significant sand and gravel aquifers, and parcel count total. In siting Segment 1, CMP stated that it considered the presence of publicly owned conservation lands (e.g., the Appalachian National Scenic Trail and Maine Bureau of Parks and Lands properties), as well as those held by private conservation organizations such as The Nature Conservancy and the New England Forestry Foundation. The paramount goal of the route selection was to avoid iconic scenic and recreational areas that characterize this part of western Maine, including the Bigelow Preserve, the Crocker Mountain High Peaks area, Mount Abraham, Saddleback Mountain, the Moosehead Region Conservation Easement, Grace Pond in Upper Enchanted Township, the Leuthold Forest Preserve, the Number 5 Bog Ecological Reserve, and the Moose River/Attean and Holeb Ponds. CMP further stated that care was taken to microsite the new corridor in a manner that would avoid visual impacts to smaller but visually sensitive areas such as the Moxie Falls Scenic Area and the Cold Stream Forest.

CMP stated that it would utilize existing transmission line corridors to the greatest extent practicable for the proposed Project. Approximately 73 percent of the proposed Project would be sited in existing transmission corridors, and CMP already holds title, right, or interest to lands within these existing corridors. Regarding Segment 1, the undeveloped corridor between the Canadian border and The Forks Plantation, CMP asserts that it has fee title, leases, and easements to all the land within the Preferred Alternative corridor.

Ultimately, CMP decided that the Preferred Alternative would be the least environmentally damaging and most cost-effective option and is the route selected for the proposed Project.

¹³ CMP witness Brian Berube, hearing transcript, April 2, 2019, pages 129-130; NRPA application, section 2.0.

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CMP evaluated additional specific alternatives to avoid crossing the P-RR subdistricts at the Kennebec River, Beattie Pond, and the Appalachian Trail.

In an effort to avoid the P-RR subdistrict at Beattie Pond, CMP negotiated an agreement with a landowner for a corridor south of the pond through Merrill Strip Township.¹⁴

CMP provided an easement to the United States government for the construction of the Appalachian Trail at the location where it now seeks to install an additional transmission line as part of the proposed Project.¹⁵ The easement reserves the right to build and maintain additional transmission lines and clear within the corridor. CMP contends that alternative alignments at this location would result in one or more new crossings of the Appalachian Trail where there is not an existing transmission line.

None of the components of the proposed underground crossing of the Kennebec River would be visible from the P-RR subdistrict. CMP concluded that the previously proposed overhead crossing of the Kennebec River is no longer suitable as it would have a greater environmental impact than the current proposal.

More detailed discussion of alternatives for sections of the proposed Project that would cross or traverse the P-RR subdistricts is provided below.

b. Alternative Routes for Transmission Line Corridor: Undergrounding Alternative

Several intervenors raised the concern that CMP did not include undergrounding the transmission line as an alternative considered to the proposed overhead crossing of the Appalachian Trail P-RR subdistrict. In response, CMP argued that it “is under no obligation to analyze alternatives that are too remote, speculative, or impractical to pass the threshold test of reasonableness.... It was and remains so obvious that undergrounding would not be practicable that CMP did not initially include it as an alternative in its Applications.”¹⁶ CMP testified that when the proposed Project was designed and put to bid for the Massachusetts RFP, incorporating the costs associated with undergrounding would have resulted in CMP’s proposal not being competitive relative to the other proposals and therefore not selected by the Massachusetts Electric Distribution Companies.¹⁷ Additional costs to underground the proposed Project at the Appalachian Trail P-RR subdistrict would be borne by CMP (or an affiliate owner of the [proposed] Project) and its investors.¹⁸

¹⁴ Prior to submitting its September 2019 application amendment, CMP testified that the landowner demanded approximately 50 times the fair market value for the land necessary to avoid the Beattie Pond P-RR. Consequently, CMP concluded that this alternative was not reasonably available. (CMP witness Brian Berube, hearing transcript, April 2, 2019, page 130.)

¹⁵ CMP rebuttal testimony, exhibit 9-B.

¹⁶ CMP post-hearing reply brief, page 20.

¹⁷ CMP witness Thorn Dickinson, prefiled rebuttal testimony.

¹⁸ CMP witness Thorn Dickinson, prefiled rebuttal testimony, page 11.

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Despite CMP's conclusion that undergrounding would be obviously cost prohibitive without conducting a thorough analysis, CMP provided an underground alternatives analysis in response to the testimony of witnesses in Intervenor Groups 2, 6, and 8. CMP additionally provided detailed cost analysis information to the Commission and Department on May 17, 2019. CMP argued that "this analysis confirmed CMP's initial determination that undergrounding the [proposed] Project, or even portions of the [proposed] Project beyond the proposed undergrounding at the upper Kennebec River, is not reasonable, and therefore also could not be 'practicable,' because the costs of doing so would defeat the purpose of the [proposed] Project. For the same reason, undergrounding in the two other P-RR subdistricts that the [proposed] Project will cross is not suitable or reasonably available to CMP."^{19,20}

Intervenor Groups 2, 4, and 10 argued that CMP did not conduct a proper and thorough alternatives analysis, in part, because the time to conduct such analysis was at the time the proposed Project was being sited, not during the hearing. Intervenor Group 4 argued that the amount of redacted information in CMP's undergrounding cost analysis renders the analysis of limited use in evaluating whether or not these figures are reasonable, what they include, and whether the alternatives could have been practicable, had they ever truly been considered by CMP.²¹

Intervenor Group 8 argued that HVDC transmission lines installed worldwide that are similar to the one proposed by CMP are routed underground and therefore are technically feasible. Undergrounding some or all of the proposed Project in Segment 1, Intervenor Group 8 argues, is a financially viable alternative that would mitigate scenic and recreational concerns in this section of the proposed Project. CMP committed to route the proposed Project under the Kennebec River, which will cost \$42 million, approximately four percent of the project's capital cost.

Intervenor Group 8 argued the incremental cost increases for undergrounding the specific areas within the P-RR subdistrict for Segment 1 range from \$13, 28, and 30 million, which is approximately one, three, and three percent increases in the capital costs for the proposed Project. The total associated cost attributable to routing under the Kennebec River and specific areas in Segment 1, therefore, sum to only 11 percent of the proposed Project's total costs. Intervenor Group 8 argued that CMP conceded that its budget includes a contingency of 15 percent of the total project cost. Accordingly, undergrounding specific areas within the P-RR subdistrict for Segment 1 is well within CMP's anticipated contingency funds for the NECEC.²²

CMP argued that, contrary to the assertions of Intervenor Group 8, undergrounding is not available or feasible considering the technology and logistics and doing so would defeat the purpose of the proposed Project because it would not have been selected by the Massachusetts Electric Distribution

¹⁹ CMP post-hearing reply brief, pages 20-21.

²⁰ CMP considered undergrounding alternatives for all three P-RR subdistricts proposed in its initial application. However, the September 2019 application amendment eliminated all portions of the proposed Project from the Beattie Pond P-RR subdistrict. This change in the proposed Project is not reflected in testimony and other record evidence from the hearing that is cited in this order.

²¹ Intervenor Group 4 post-hearing brief.

²² Intervenor Group 8 post-hearing brief, page 4 (footnotes omitted).

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Companies.²³ CMP argued that “[t]he design of transmission lines that interconnect systems is very, very site dependent” and that “underground transmission installations cause a continuous surface disruption (rather than intermittent and widely spaced at each overhead structure installation location), require additional control measures for soil erosion, sedimentation, and dust generation during construction, require permanent access roads to every jointing location along the route, and can only avoid wetlands and waterways by using higher cost and higher risk trenchless methods.”²⁴

In both prefiled rebuttal testimony and at the live hearing, CMP’s witness, Justin Bardwell provided testimony regarding underground transmission methods, potential alternate routes, estimated costs, anticipated environmental and public impacts, and additional risk during construction. Mr. Bardwell identified and discussed direct burial and trenchless installation technologies used as alternatives to overhead transmission lines. Key points relative to the Commission’s review include the following.

- Generally, direct burial of a transmission line in a trench is the lowest cost underground option. This requires digging a trench, management of spoils, erosion control, and removal of trees along a 75-foot wide corridor.
- Direct burial is often unsuitable for installation within roadways.
- Trenchless horizontal directional drill (“HDD”) technology methodology can be used to overcome or avoid surface obstacles, such as highways, railroads, sensitive wetlands, or waterways.
- HDD installation is two to ten times more expensive than trenched installations.
- HDD requires termination stations, similar in appearance to a substation, when transitioning between overhead and underground segments.
- Underground construction for the proposed Project would be expected to be mostly direct burial with HDD installations used for major highway, waterway, and wetlands crossings.
- The cost estimate for undergrounding the entirety of the proposed route in the proposed Project would be approximately \$1.9 billion. The cost estimate for undergrounding only Segment 1 would be approximately \$750 million. These costs are approximately 5 to 7 times more than the expected cost of overhead transmission construction.
- The vast majority of environmental impacts would be temporary impacts associated with construction.
- Outage rates for overhead and underground installations are respectively 0.53 incidents per 100 miles and 0.141 incidents per 100 miles. Outages in an overhead line are often restored

²³ CMP witness Thorn Dickinson, prefiled rebuttal testimony, pages 2-3, 10.

²⁴ CMP post-hearing reply brief, page 21.

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in a few hours, while outages in underground cables typically require 2 to 5 weeks to restore.

- Larger vehicles are needed to service an underground transmission line than an overhead transmission line making access during winter and spring more challenging.

c. Kennebec River P-RR subdistrict alternatives analysis

The proposed Project includes the proposed crossing of the Kennebec River at a location north of Moxie Stream, between West Forks Plantation and Moxie Gore. This river segment is commonly referred to as the Kennebec Gorge and is located just below the Harris Station Dam, the largest hydropower generating facility in Maine. The P-RR subdistrict extends 250 feet from the normal high water mark on both sides of the Kennebec River from the outlet of Indian Pond at the Harris Station Dam to 0.5 miles above its confluence with the Dead River in The Forks Plantation.²⁵

Recreational whitewater rafting in Maine is centered on the Kennebec River, particularly within the Kennebec Gorge, the Dead River, and the West Branch of the Penobscot River.²⁶ Controlled flow releases from the Harris Station Dam support commercial and recreational rafting in this reach of the Kennebec. Between the dam and its confluence with the Dead River, there are no known residential or commercial developments within the Kennebec River P-RR subdistrict. Several individuals and companies representing the recreational and commercial uses of the Kennebec Gorge for whitewater rafting intervened in and testified at the hearing held by the Commission in April and May 2019.

In addition to the broader alternatives analyses discussed above, CMP evaluated three alternatives specific to the proposed crossing of the Kennebec River: 1) at a location north of Moxie Stream, between West Forks Plantation and Moxie Gore; 2) a crossing of the Kennebec River on CMP-owned land about one mile downstream of Harris Dam; and 3) a crossing of the Kennebec River near the Harris Station powerhouse. These are depicted in Figure 25-3 of CMP's Site Law application.

CMP selected the option north of Moxie Stream, between West Forks Plantation and Moxie Gore as its preferred alternative and, in its September 27, 2017, Site Law application, proposed to cross the Kennebec Gorge with an overhead transmission line. In response to early concerns about the impact of the overhead crossing proposal on scenic character and compatibility with the existing recreational uses, CMP, on October 19, 2018, filed an amendment to its Site Law and NRPA applications to incorporate an underground crossing of the Upper Kennebec River using HDD technology.

The proposed HDD crossing of the Kennebec River would not include the construction or placement of any structures within the P-RR subdistrict. The proposed HDD crossing would consist

²⁵ Comprehensive Land Use Plan, Appendix B, Rivers with Special Zoning (2010).

²⁶ Comprehensive Land Use Plan, page 102.

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of three main components: 1) the HDD bore, a subgrade conduit containing the HDVC line; 2) two termination stations, one on each side of the river, where the transmission lines transition from underground to overhead; and 3) trenching, a direct buried conduit used to carry the transmission cables from the HDD bore to the termination station.

Intervenors provided no final arguments opposing CMP's proposed HDD crossing of the Kennebec River.

d. Commission findings and conclusions regarding the Kennebec P-RR subdistrict alternatives analysis

Given the potential for significant visual impacts to recreational users on the Kennebec River from an overhead alternative at that location, that the undergrounding alternative using a directional drill would result in no construction activity within the Kennebec River P-RR subdistrict, and the termination stations, which would also be located outside the Kennebec River P-RR, will be well buffered from the river, the Commission concludes that there is no other alternative that is both suitable and reasonably available to the applicant outside of the Kennebec River P-RR subdistrict.

e. The Merrill Strip Alternative (M-GN subdistrict) to the original Beattie Pond Proposed Route (P-RR subdistrict)

In its initial application, CMP proposed a section of the new corridor within the Beattie Pond P-RR subdistrict encompassing portions of Beattie Pond Township, Lowelltown Township, and Skinner Township. Beattie Pond is a remote, undeveloped, management class 6 lake.²⁷ The management objective of management class 6 ponds is prohibiting development within 1/2 mile of these ponds to protect the primitive recreational experience and coldwater lake fisheries in remote settings.²⁸ In 1978, the Commission established a P-RR subdistrict within 1/2 mile of the normal high water mark of Beattie Pond.

As stated above, a utility facility in a P-RR subdistrict is allowed by special exception, which requires an alternatives analysis. In its initial application, CMP evaluated an alternative route south of the Beattie Pond P-RR, an alternative route north of the Beattie Pond P-RR, and undergrounding. Regarding the alternative route south of the Beattie Pond P-RR, CMP stated that it attempted to negotiate an alternative alignment south of the Beattie Pond P-RR subdistrict through Merrill Strip Township, but the landowner required compensation of approximately 50 times fair market value for that property. (Thus, CMP concluded that that alternative was not practicable.)

Following the Commission's September deliberations, CMP petitioned to reopen the record:

[I]n light of the questions and concerns expressed by [the Commission] during the hearing, CMP continued to pursue the Merrill Strip Alternative

²⁷ Commission's Wildlands Lake Assessment Findings, Ch. 10, Appendix C

²⁸ Comprehensive Land Use Plan, page 290.

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and recently had the opportunity to re-engage in negotiations with the landowner. Good cause exists to reopen the record because on August 30, 2019 CMP was able to close on the purchase of an easement, reviving the Merrill Strip Alternative and enabling CMP to propose construction of the [proposed] Project entirely outside of the Beattie Pond P-RR subdistrict.²⁹

The Commission and the Department granted CMP's request to reopen the record and, in its September 2019 application amendment, CMP proposed to avoid the Beattie Pond P-RR subdistrict by routing the proposed Project through a new tract, the Merrill Strip Alternative. The Merrill Strip Alternative is a 150-foot wide proposed transmission line corridor that would extend for approximately one mile across the northeast corner of Merrill Strip between Skinner and Beattie Townships. The Merrill Strip Alternative is located within a General Management subdistrict, where a utility facility is allowed with a permit.

The 150-foot wide corridor would be cleared of capable woody vegetation and managed in a persistent early successional habitat (i.e., scrub-shrub), consistent with CMP's Vegetation Management Plans to accommodate construction and maintenance of the transmission line. The Merrill Strip Alternative would require six new structures, five of which will be direct-embed monopoles and one will be a direct-embed two pole structure. The structures would be self-weathering steel, consistent with the CMP's original proposal, ranging in heights from 96 feet to 118.5 feet above ground level.³⁰

Intervenor Groups 2 and 10 "agree that the new location avoids Beattie Pond and consequently eliminates the negative impacts on this particular special resource by removing a small segment of the route from this sub-district. However, the short time frame to study this new area and the inability to give this new route adequate peer review leaves open the question of whether there are other as yet unidentified, negative affects created in this newly impacted area. It is also important to note that simply shifting 1 mile of the 53 miles through Maine's north western woods does not suddenly make the entirety of the 145 mile corridor acceptable nor mean that CMP has met its burden of proof under either the Department's or the Commission's legal standards."³¹

Intervenor Group 4 stated that CMP "did not conduct an adequate alternatives analysis" and that "[i]t did not fully analyze all of the alternative routes and it too quickly dismissed alternatives that the company deemed too expensive at the time. As a result, [CMP] failed to truly evaluate whether or not there were opportunities to avoid and minimize environmental impacts to achieve the least environmentally damaging practicable alternative."³²

Intervenor Group 3 stated that "[t]he [proposed Project] should be approved with or without the [Merrill Strip Alternative] because its benefits vastly outweigh its environmental costs, especially given proposed mitigation techniques. The [Merrill Strip Alternative], however, is on its face an

²⁹ Petition of Central Maine Power Company to Reopen the Record, page 2.

³⁰ Site Law amendment application, section 1.0.

³¹ Intervenor Groups 2 and 10's Response to CMP's Petition to Reopen the Record, page 3.

³² Intervenor Group 4's Comment on Supplemental Information on the Merrill Strip Alternative from Central Maine Power, pages 9-10.

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environmentally superior alternative to [the proposed Project] crossing the Beattie Pond P-RR Subdistrict. The [Merrill Strip Alternative] is shorter by nearly 30 percent (1 mile versus 1.4 miles) and will use fewer structures, in an area almost exclusively used for private commercial timber harvesting. Therefore, [the Merrill Strip Alternative] will create fewer and less significant construction, maintenance, and environmental impacts.”³³

Intervenor Group 7 stated that “CMP’s [a]mendment presents a straight-forward alternative warranting consideration and approval by the [Department] and [the Commission] [sic] The [Merrill Strip Alternative] clearly meets the [Commission’s] land use standards, the [Department’s] Site Law and NRPA standards, and is preferable to the originally proposed alignment of the [proposed] Project in the vicinity of Beattie Pond and through the Beattie Pond P-RR subdistrict.”³⁴

In response to Intervenor comments, CMP stated that “the evidence demonstrates that the Merrill Strip Alternative alignment meets the [Commission’s] land use standards and the Site Law and NRPA standards, and is preferable to alignment of the [proposed] Project through the Lowelltown P-RR subdistrict. In sum, the [proposed] Project as modified by the Merrill Strip Alternative meets all Site Law and NRPA approval standards, and [Commission] certification requirements.”³⁵

The Commission considered all relevant testimony and documents in the record for this proceeding. Regarding alternatives for locating the proposed Project outside of the P-RR subdistricts, CMP has proposed the Merrill Strip Alternative to address the relevant Chapter 10 criteria. As a result, no portion of the proposed Project, as amended to include the Merrill Strip Alternative, would be located within the Beattie Pond P-RR subdistrict. The Merrill Strip Alternative is located in a General Management subdistrict in which a utility facility is a use allowed with a permit. As such, the Commission’s special exception analysis, including the alternatives analysis, does not apply to this portion of the proposed Project.

f. Appalachian Trail P-RR subdistrict alternatives analysis

The Commission has established a 200-foot wide P-RR subdistrict centered on the entire length of the Appalachian Trail within its jurisdictional area. The proposed Project would cross the P-RR subdistrict in three locations at the Appalachian Trail adjacent to Moxie Pond in Bald Mountain Township. At this location, the Appalachian Trail is located in an existing CMP corridor containing a 115-kilovolt transmission line. One of the three proposed Appalachian Trail crossings is located at an area referred to as Joe’s Hole, which crossing is depicted in Figure 25-4 of CMP’s Site Law application and in “Photosimulation 50: Troutdale Road, Bald Mountain Twp” included as Appendix D of CMP’s December 7, 2018, response to an additional information request.

³³ Intervenor Group 3’s Comments in Support of the Merrill Strip Alternative and CMP’s Request for Prompt LUPC Deliberation, page 2

³⁴ Intervenor Group 7’s Comments of Western Mountains & Rivers Corporation on Merrill Strip Alternative, page 5.

³⁵ CMP’s Objection and Reply of Central Maine Power Company to Public Comments and to Intervenor Comments and Testimony, pages 13-14.

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The cleared portion of CMP's existing corridor in the Appalachian Trail P-RR is approximately 150 feet wide. CMP proposes to widen the clearing by an additional 75 feet on the southern side of the corridor to accommodate the new HVDC transmission line. The resulting cleared portion of the corridor in this location would be 225 feet wide. Portions of six proposed HVDC transmission structures would be visible from the Appalachian Trail P-RR and co-located within an existing CMP transmission line corridor.

CMP's witness testified that while the existing corridor intersects the P-RR subdistrict near the Troutdale Road, the proposed clearing associated with the proposed Project is entirely outside the P-RR and in a Residential Development subdistrict. CMP's witness introduced Applicant Exhibit "Cross-1" depicting the location of the proposed clearing associated with the proposed Project and the zoning boundaries for the P-RR subdistricts.³⁶ Based on information provided by CMP regarding the extent and location of vegetative clearing at the proposed Appalachian Trail crossing, the Commission finds that the proposed Project crosses the Appalachian Trail P-RR in two rather than the three locations identified in the September 2017 Site Law application.

CMP stated in their Site Law application that "[t]he configuration of the [Appalachian Trail], within and adjacent to an approximately 3,500-foot long portion of transmission line corridor, prevented CMP from avoiding direct impacts to the subdistrict through the siting of the transmission line structures. As a result, one of five transmission line structures in this portion of the Project corridor is located within the P-RR subdistrict." CMP additionally stated that "[a]lternative alignments of the transmission line to meet the purpose and need of the [proposed] Project would result in crossings of the Appalachian Trail in one or more locations where there are no existing transmission line corridors. Co-location of the transmission line within the existing transmission line corridor is therefore the least environmentally-damaging practicable alternative."³⁷

In 1987, CMP granted to the United States of America an easement for the Appalachian Trail to cross CMP's land.³⁸ Pursuant to the easement, CMP reserves the right to construct electric transmission lines in the corridor that the Appalachian Trail crosses. With respect to undergrounding at the proposed Appalachian Trail crossing, CMP's witness testified that CMP would have to acquire the underground rights from the United States National Park Service and CMP has not sought to acquire such rights. Intervenor Group 4 argued that CMP, as part of its alternative analysis, should have initiated discussions with private land owners, the National Park Service, and the Maine Appalachian Trail Club to explore the potential alternative of relocating the Appalachian Trail outside CMP's corridor.³⁹

Additional numerical cost analysis information concerning the proposed crossing of the Appalachian Trail provided by CMP on May 17, 2019, included estimates for undergrounding the proposed transmission line at the Appalachian Trail crossing. The estimated cost of an underground alternative for the approximately 1.0 mile of transmission line within the Appalachian Trail P-RR is \$29.8 million, or 3.13% of the overall proposed Project cost of approximately \$950 million. CMP's

³⁶ CMP witness Peggy Dwyer, hearing transcript, April 2, 2019, pages 143-145.

³⁷ Site Law application section 25.3.1.3.

³⁸ CMP prefiled rebuttal testimony, exhibit CMP-9-B.

³⁹ Intervenor Group 4 post-hearing brief, page 9.

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witness testified that underground construction is not a practicable or reasonable alternative and that underground construction would have increased environmental impacts, increased impacts to the public and increased cost to overhead construction. CMP argued that undergrounding of the transmission line at Joe's Hole would require a large hydraulic rig to be set up next to the Appalachian Trail for several months causing significant noise and visual impacts and would require construction of termination stations within site of the trail.⁴⁰ CMP did not address whether the timing of such construction could be coordinated during a period of reduced trail use to minimize the impacts on trail users.

Intervenor Groups 2 and 10 argued that the proposed Project will “degrade the hiking experience for users of the Appalachian Trail. It would be the first crossing of the [Appalachian Trail] by a transmission line of this size anywhere in the state.”⁴¹

Intervenor Group 4 argued that “[t]he widening of the corridor and the addition of a second much larger line would significantly increase the visual impact of these transmission line crossings on users of the [Appalachian Trail].” “The proposed [P]roject would greatly exceed the size, in both height and clearing width, of any existing transmission line crossing of the [Appalachian Trail] in Maine, and increase the sense of users that the trail at this location crosses a developed landscape.” “We agree that creating a new crossing of the [Appalachian Trail] where none currently exists is not a preferable alternative. However, there are at least three other potential alternatives that have not been adequately explored: routing the project along existing roads to avoid this [Appalachian Trail] crossing, relocating the [Appalachian Trail], or burying the line at the proposed [Appalachian Trail] crossing.” Intervenor Group 4 argues that CMP has not met the burden to demonstrate that the proposed Project satisfies the requirements for a special exception to cross the P-RR subdistrict at the Appalachian Trail.⁴²

g. Commission findings and conclusions regarding the Appalachian Trail P-RR subdistrict alternatives analysis

The Commission considered all relevant testimony and documents in the record for this proceeding. Regarding alternatives for locating the proposed Project outside of the Appalachian Trail P-RR subdistrict, the Commission finds most credible CMP's testimony and other evidence provided by CMP. The Commission finds that alternative routes for crossing the Appalachian Trail are not suitable because they would cross the Appalachian Trail in places not already impacted by an existing transmission line.⁴³

Undergrounding at the Appalachian Trail P-RR would necessitate construction of termination stations that would be visible to remote recreational hikers and necessitate the positioning of a large hydraulic drilling rig next to the trail for several months which would result in greater noise and visual impacts than the construction of the proposed overhead transmission lines.

⁴⁰ CMP witness Justin Bardwell, hearing transcript, May 9, 2019, page 343; CMP's post-hearing brief, p. 27.

⁴¹ Intervenor Groups 2 and 10 post-hearing brief, page 7.

⁴² Intervenor Group 4 post-hearing brief and proposed finding of facts, pages 6-8.

⁴³ CMP witness Brian Berube, hearing transcript, April 2, 2019, page 170.

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The Commission considers cost as a factor in evaluating whether an alternative is reasonably available to an applicant. CMP's estimated costs associated with undergrounding the transmission line in the Appalachian Trail P-RR subdistricts is \$29.8 million (or 3.13% of the overall proposed Project).

Overall, as compared to the proposed overhead transmission line, undergrounding at the Appalachian Trail P-RR subdistrict would necessitate the use of more heavy equipment, longer construction time, greater disruption to traffic, additional temporary environmental impacts, construction of permanent access roads, and higher construction costs. Both overhead and undergrounding methods of installing a transmission line result in some environmental and scenic impacts within the P-RR subdistrict. The Commission finds that, on balance, the benefit to recreational users on the Appalachian Trail of undergrounding the transmission line does not outweigh the environmental, technological, logistical, and financial implications of using this methodology in the Appalachian Trail P-RR subdistrict and is therefore not suitable to the proposed use or reasonably available to the applicant.

h. P-WL subdistrict alternatives analysis

The Wetland Protection subdistrict includes the area enclosed by the normal high water mark of surface water bodies, including coastal and freshwater wetlands and rivers, streams and brooks, within the Commission's jurisdictional area. Freshwater wetlands means “[f]reshwater swamps, marshes, bogs and similar areas that are inundated or saturated by surface or groundwater at a frequency and for a duration sufficient to support, and which under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soils and not below the normal high water mark of a body of standing water, coastal wetland, or flowing water.” Ch. 10, § 10.02(87).

The Commission's Chapter 10 describes three categories of coastal or freshwater wetlands included in P-WL subdistricts: P-WL1, P-WL2, and P-WL3. Ch. 10, § 10.23(N)(2)(a).

The Department considers impacts to freshwater wetlands, including the wetlands zoned as P-WL, in its review of the proposed Project pursuant to the NRPA and the Department's related rule, Wetlands and Waterbodies Protection, 06-096 C.M.R. ch. 310. The Commission's Protected Natural Resource standards set forth in Ch. 10, § 10.25(P) are therefore duplicative and not considered by the Commission in its certification decision.

In preparing its NRPA application, CMP provided an alternatives analysis that identified wetlands and water bodies generally one acre and larger that are listed in the National Wetlands Inventory maps developed by the United States Fish and Wildlife Service, which would be crossed by the proposed Project. CMP considered and favored transmission line routes that minimized crossings of wetlands and water bodies to minimize unavoidable temporary (e.g., construction mat crossings) and permanent (e.g., habitat conversion, filling) impacts to these resources. CMP concluded that frequency of wetland occurrence per mile of transmission line corridor is greater along the route

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alternatives than along the preferred route for which it seeks permits. As such, a route meeting the purpose and need of the proposed Project and reasonably available to CMP could not be found without similar or greater impact to P-WL subdistricts.⁴⁴

CMP's preferred alternative route, for which it seeks permits, includes 76.3 acres of mapped wetland impacts compared to 118.3 acres for Alternative 1 and 113.3 acres for Alternative 2.⁴⁵ CMP's application identifies that the proposed Project would cross P-WL subdistricts a total of 34 times.⁴⁶ CMP did not provide information regarding the number of crossings of P-WL subdistricts the two alternative routes would involve.

The Commission finds that the proposed Project would intersect a total of 73 individually zoned P-WL subdistricts. A summary of the locations and wetland category for each crossing is provided in Table 3 below. A total of two transmission structures, identified in Table 4 below, are located within the P-WL subdistricts.⁴⁷ The primary impact to wetlands from the proposed Project would be the conversion of forested wetlands to scrub-shrub wetlands and emergent wetlands. The footprint of the two proposed transmission structures within P-WL3 wetlands would result in permanent impacts.

Table 3. Location and category of P-WL wetlands within the proposed Project area.

Location	Nearest Transmission Structure	Wetland Category
Appleton Township	3006-723	P-WL1: Wetlands of Special Significance
	3006-727	P-WL2: Scrub-shrub Wetlands
	3006-728	P-WL3: Forested Wetlands
	3006-731	P-WL3: Forested Wetlands
	3006-754	P-WL1: Wetlands of Special Significance
Bald Mountain Township	3006-436	P-WL1: Wetlands of Special Significance
	3006-436	P-WL3: Forested Wetlands
	3006-440	P-WL3: Forested Wetlands
	3006-441	P-WL3: Forested Wetlands
	3006-447	P-WL2: Scrub-shrub Wetlands
	3006-453	P-WL3: Forested Wetlands
	3006-463	P-WL1: Wetlands of Special Significance
	3006-483	P-WL1: Wetlands of Special Significance
	3006-483	P-WL1: Wetlands of Special Significance
Bradstreet Township	3006-667	P-WL2: Scrub-shrub Wetlands
	3006-667	P-WL1: Wetlands of Special Significance

⁴⁴ Site Law application, section 25.3.2. CMP's alternatives analysis is included in section 2.0 of its NRPA application.

⁴⁵ CMP Witness Gerry Mirabile, prefiled direct testimony, pages 19-20.

⁴⁶ Site Law application, section 25.3.2.

⁴⁷ CMP's August 13, 2018, response to additional information request.

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	3006-671	P-WL2: Scrub-shrub Wetlands
	3006-678	P-WL1: Wetlands of Special Significance
	3006-678	P-WL2: Scrub-shrub Wetlands
	3006-680	P-WL1: Wetlands of Special Significance
	3006-682	P-WL3: Forested Wetlands
	3006-685	P-WL1: Wetlands of Special Significance
	3006-687	P-WL3: Forested Wetlands
	3006-687	P-WL2: Scrub-shrub Wetlands
	3006-687	P-WL1: Wetlands of Special Significance
	3006-688	P-WL1: Wetlands of Special Significance
Concord Township	3006-354	P-WL3: Forested Wetlands
	3006-357	P-WL3: Forested Wetlands
	3006-361	P-WL3: Forested Wetlands
	3006-365	P-WL1: Wetlands of Special Significance
	3006-365	P-WL3: Forested Wetlands
	3006-365	P-WL2: Scrub-shrub Wetlands
	3006-365	P-WL3: Forested Wetlands
	3006-366	P-WL3: Forested Wetlands
	3006-370	P-WL2: Scrub-shrub Wetlands
	3006-375	P-WL2: Scrub-shrub Wetlands
	3006-376	P-WL2: Scrub-shrub Wetlands
	3006-376	P-WL3: Forested Wetlands
	3006-378	P-WL3: Forested Wetlands
	3006-708	P-WL1: Wetlands of Special Significance
Hobbstown Township	3006-703	P-WL1: Wetlands of Special Significance
	3006-708	P-WL3: Forested Wetlands
	3006-710	P-WL3: Forested Wetlands
	3006-721	P-WL2: Scrub-shrub Wetlands
Johnson Mountain Township	3006-588	P-WL2: Scrub-shrub Wetlands
	3006-599	P-WL3: Forested Wetlands
	3006-614	P-WL2: Scrub-shrub Wetlands
	3006-650	P-WL2: Scrub-shrub Wetlands
Moxie Gore	3006-540	P-WL3: Forested Wetlands
	3006-541	P-WL3: Forested Wetlands
	3006-543	P-WL3: Forested Wetlands
	3006-548	P-WL3: Forested Wetlands
Skinner Township	3006-770	P-WL2: Scrub-shrub Wetlands
T5 R7 BKP WKR	3006-693	P-WL2: Scrub-shrub Wetlands
	3006-693	P-WL3: Forested Wetlands
	3006-694	P-WL3: Forested Wetlands

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	3006-694	P-WL3: Forested Wetlands
	3006-694	P-WL3: Forested Wetlands
	3006-695	P-WL3: Forested Wetlands
	3006-700	P-WL1: Wetlands of Special Significance
	3006-700	P-WL3: Forested Wetlands
	3006-702	P-WL1: Wetlands of Special Significance
	3006-702	P-WL3: Forested Wetlands
	3006-703	P-WL1: Wetlands of Special Significance
	3006-703	P-WL3: Forested Wetlands
	3006-704	P-WL3: Forested Wetlands
	3006-705	P-WL3: Forested Wetlands
The Forks Plantation	3006-502	P-WL2: Scrub-shrub Wetlands
	3006-502	P-WL1: Wetlands of Special Significance
	3006-502	P-WL1: Wetlands of Special Significance
	3006-530	P-WL3: Forested Wetlands
West Forks Plantation	3006-566	P-WL3: Forested Wetlands
	3006-567	P-WL3: Forested Wetlands

Table 4. Proposed transmission structures located within P-WL subdistricts.

Structure Number	Subdistrict	Location	Natural Resource Map Number
3006-541	P-WL3	Moxie Gore	Segment 1 - Map 113
3006-548	P-WL3	Moxie Gore	Segment 1 - Map 110

Capable tree species include, but are not limited to, fir, spruce, oaks, pines, maples, birches, poplar, elm, beech, and basswood.⁴⁸ CMP developed a Construction Vegetation Clearing Plan which describes the restrictive management practices required for protected natural resources, including freshwater wetlands, during vegetation clearing associated with proposed Project construction.⁴⁹ CMP also developed a Post-Construction Vegetation Maintenance Plan which describes the restrictive maintenance requirements for protected natural resources within the transmission line corridor and applies to routine maintenance.⁵⁰

i. Commission findings and conclusions regarding the P-WL subdistrict alternatives analysis

The Commission finds that the two alternative routes analyzed by CMP would result in greater wetland impact than CMP’s preferred alternative for which it seeks permits. In addition, the Commission finds that the trench method of installing transmission lines, as discussed by Mr.

⁴⁸ Site Law application, section 10.1.

⁴⁹ Site Law application, exhibit 10-1.

⁵⁰ Site Law application, exhibit 10-2.

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Bardwell, would necessitate excavation of a trench through each wetland area resulting in temporary wetland impacts from the removal of vegetation and disturbance of soils. The underground trench alternative would also involve permanent changes in wetland vegetation, including the conversion of forested wetland to scrub-shrub wetland. Mr. Bardwell testified to the cost of horizontal directional drilling beneath wetlands. The Commission finds that the cost of horizontal direction drilling beneath wetlands would be cost prohibitive and not an alternative that is reasonably available for the 73 individually zoned P-WL subdistricts within the Commission's jurisdictional area. In consideration of all the evidence, the Commission concludes that there is no alternative site which is both suitable to the proposed use and reasonably available to the applicant relative to the P-WL subdistricts.

SPECIAL EXCEPTION BUFFERING ANALYSIS

The special exception criteria for the P-RR and P-WL subdistricts require that the use can be buffered from those other uses and resources within the subdistrict with which it is incompatible. For purposes of Chapter 10, the proposed Project use is a utility facility. Because components of the proposed Project will be visible, the Commission considers visual screening of the proposed use from other uses and resources with which it is incompatible to determine whether the proposed use is sufficiently buffered.

CMP submitted a visual impact assessment, prepared by Terrence J. DeWan & Associates. CMP's visual impact assessment, which includes photosimulations, examines the potential scenic impact of the transmission line from 32 key observation points, including the site of the proposed Kennebec River crossing, and the site of the proposed crossing of the Appalachian Trail.^{51,52}

The Department contracted with Dr. James F. Palmer, Scenic Quality Consultants, an independent scenic consultant, to assist in the Department's review of the evidence submitted on scenic character. Given the overlap of the Department's scenic character review with the Commission's consideration of scenic impacts as they relate to the buffering special exception criterion, the Commission considered Dr. Palmer's review of CMP's visual impact assessment.

⁵¹ Site Law application, section 6.16, Appendix D, Photosimulations I and IA; section 6.16, Appendix D, Photosimulations 10, 10A, 10B, 11, and 11A; and section 6.16, Appendix E.

⁵² The perspective of some key observation points is from private property. In its prefiled direct testimony, Wagner Forest testified that "the inclusion of photos and photo simulations from private lands, including those from our managed property, taken without our consent. This project will pass through several miles of private working forests, which only allow public recreational access at the sole discretion of the individual landowners. Based on recent public comments regarding the NECEC project, it is apparent this access privilege is misunderstood by many in the public. We ask you to not encourage this misunderstanding by considering photos or simulations from viewpoints that occur on private land." The photosimulations provided for the Kennebec River, Beattie Pond and the Appalachian Trail were not taken from lands owned by Wagner Forest.

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In siting the proposed Project, and specifically the segments within the P-RR subdistricts, CMP stated that it maximized the use of natural buffers, such as topography and intervening vegetation, to maintain visual buffers, and also sited the proposed new transmission line within existing transmission line corridors.⁵³

a. Kennebec River P-RR buffering analysis and conclusions

As stated above, the proposed use is a utility facility. The P-RR subdistrict extends 250 feet from the normal high water mark on each side of the Kennebec River. Existing uses of the Kennebec River at the site of the proposed crossing include recreational whitewater rafting, kayaking, and fishing. CMP's proposed crossing of the river using underground horizontal directional drilling technology would result in no project components being visible from this P-RR subdistrict.

CMP proposed to retain a forested buffer of approximately 1,200 in length within the corridor between the northwest shoreline and the termination station and a forested buffer of approximately 1,000 in length will be preserved within the corridor between the southeast shoreline and the termination station. Updated photographic simulations and computer model images of the proposed HDD crossing, submitted by CMP with its October 19, 2018, Site Law application amendment, demonstrate that no components of the proposed Project would be visible from the Kennebec River P-RR subdistrict.

Intervenor Groups 2 and 10 argued that “[t]he West Forks has seen over 100,000 people a year recreate on their two class A Rivers – the Kennebec River Gorge and the Dead River – for whitewater boating, commercial and private rafting as well as canoeing, kayaking and fishing”; that no level of buffering can protect the use of recreational whitewater rafting on this type of river; that “CMP has failed to meet the special exception criterion regarding buffering”; and that “[n]o visual assessment has been done or study of what damage directional drilling will do to the surrounding area, Kennebec Gorge or the cold stream fisheries located just below the crossing.”⁵⁴ The Commission disagrees. Specifically, the proposed undergrounding of the transmission line at the Kennebec River crossing will prevent the proposed Project from being seen by users of the river. Based on CMP's photosimulations, the Commission finds that CMP's revised proposal to underground the line within the Kennebec River P-RR would entirely avoid scenic impacts within the Kennebec River P-RR subdistrict. The Commission concludes that CMP's proposed Project will be buffered from those other uses and resources within the Kennebec River P-RR subdistrict with which it is potentially incompatible because no portion of the proposed Project will be visible within or from the P-RR subdistrict on either side of the river, provided CMP, for the life of the project, maintains a vegetative buffer at the Kennebec River necessary to provide visual screening (buffering) of all transmission line structures in accordance with Condition #1 of this Site Law Certification.

⁵³ CMP post-hearing brief, page 8 (footnotes omitted).

⁵⁴ Intervenor Groups 2 and 10 post-hearing brief, pages 8, 20, and 52; Intervenor Groups 2 and 10 post-hearing brief, page 8.

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b. Appalachian Trail P-RR buffering analysis and conclusions

The Appalachian Trail, a resource of national as well as world-wide significance, valued for the scenic qualities that surround it, is a nearly 2,200-mile trail stretching from Georgia to Maine. Maine's portion of the Appalachian National Scenic Trail ("Appalachian Trail") stretches from Mount Success on the New Hampshire border to Mount Katahdin in Baxter State Park. Of the 281 miles of the Appalachian Trail in Maine, almost all are located in the Commission's jurisdictional area. The Appalachian Trail in Maine is identified as one of the distinctive recreational resources used by recreational hikers. The Commission has placed P-RR subdistricts on approximately 300 miles of hiking trails, including nearly the entire Appalachian Trail within Maine.⁵⁵

CMP's summary of visual impact ratings for leaf-off snow cover describes the visual impact of the proposed Project at the [Appalachian Trail] crossing on Troutdale Road as "strong."⁵⁶ CMP proposes to utilize vegetative screening to reduce the visual impact of the proposed crossing of the Appalachian Trail P-RR. Native woody shrub species are proposed in CMP's "Joe's Hole (Moxie Pond) Planting Plan" submitted as Attachment J of CMP's August 13, 2018, response to additional information request. A total of 93 shrubs are proposed to be planted on either side of Troutdale Road in addition to maintaining non-capable vegetation within the corridor.

Intervenor Group 4 argued that "[a] special exception for construction of the proposed project should not be granted for the proposed transmission line crossing of the Appalachian Trail [] in Bald Mountain Twp....because CMP has not shown by substantial evidence that...the transmission line can be buffered from [Appalachian Trail] users."⁵⁷ "The widening of the corridor and the addition of a second much larger line would significantly increase the visual impact of these transmission line crossings on users of the [Appalachian Trail]" and that "no user surveys were conducted to actually assess users' expectations and reactions to the project."⁵⁸ "The proposed project would greatly exceed the size, in both height and clearing width, of any existing transmission line crossing of the [Appalachian Trail] in Maine, and increase the sense of users that the trail at this location crosses a developed landscape. CMP's contention that the impact on trail users would be 'negligible' is without foundation."⁵⁹ With regard to CMP's proposed planting plan for Joe's Hole, Intervenor Group 4 argued that "these plantings do not, and cannot, come close to buffering the existing use of the [Appalachian Trail], remote hiking, from the increased and incompatible impact of the wider corridor and additional much taller transmission line."⁶⁰

Where the Appalachian Trail intersects the proposed Project, it does so within an existing CMP corridor containing a 115-kilovolt transmission line. CMP argued, "[w]hile the location of the trail throughout this 3,500-foot section of existing transmission line corridor prevented CMP from entirely avoiding impacts within the P-RR subdistrict, the use of the [Appalachian Trail] in these

⁵⁵ Comprehensive Land Use Plan, pages 245, 247, 259, 273.

⁵⁶ CMP's Basis Visual Impact Form Summary Table, January 30, 2019.

⁵⁷ Intervenor Group 4 post-hearing brief, pages 6-7.

⁵⁸ Intervenor Group 4 post-hearing brief, page 7.

⁵⁹ Intervenor Group 4 post-hearing brief, page 8.

⁶⁰ Intervenor Group 4 post-hearing brief, page 10.

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locations is not incompatible with transmission lines, as evidenced by both the existing use of the corridor by [Appalachian Trail] hikers and by the easement from CMP allowing such use and by which the National Park Service [] agreed to the construction by CMP of additional above ground electric transmission lines.... The Project will add additional transmission structures, but the character of the [Appalachian Trail] in this location will not change.”⁶¹ CMP stated,

CMP is willing to relocate the [Appalachian Trail] so that it crosses the CMP transmission line corridor only once in the vicinity of Troutdale Road, eliminating two existing crossings. Before CMP could commit to such a condition, though, the National Park Service [] would need to agree to it, and CMP would need to acquire, on behalf of [National Park Service], the necessary property interests in the new location. CMP has secured rights to a parcel that would allow a reroute that eliminates two of the transmission line crossings. However, because this reroute would pass by one or two camps, the Maine Appalachian Trail Club [] prefers the existing two crossings of the transmission line corridor. CMP will continue to explore all options to find a new route that is satisfactory to [the Maine Appalachian Trail Club] and [the National Park Service]. In the interim, CMP is working with [the Maine Appalachian Trail Club] on an interim relocation that will eliminate two crossings but will approach the edge of the [proposed Project]. Provided this interim alignment is ultimately acceptable to [the Maine Appalachian Trail Club] and [the National Park Service], CMP will pay for the cost of the realignment, including any appropriate buffer plantings. CMP’s long-term goal is to secure a permanent re-route acceptable to both [the Maine Appalachian Trail Club] and [the National Park Service], and CMP is willing to commit the necessary funds to this end.⁶²

The Commission encourages CMP’s willingness to work with the National Park Service and the Maine Appalachian Trail Club to relocate the Appalachian Trail in the vicinity of the existing and proposed new crossing of the trail by the transmission line corridor.

Intervenor Groups 2 and 10 argued, “[t]he proposed [P]roject will also degrade the hiking experience for users of the Appalachian Trail. It would be the first crossing of the [Appalachian Trail] by a transmission line of this size anywhere in the state.”⁶³ Intervenor Group 4 testified, “the Appalachian Trail passes through an existing transmission line corridor containing 115 kilovolt transmission line three times at the southern end of Moxie Pond. The existing towers are about 45 feet high, less than the height of the surrounding forested vegetation. The proposed project would widen this corridor by 50 percent and install a second transmission line with towers that are 100 feet tall, more than twice the height of the existing towers and significantly taller than the surrounding forest.”⁶⁴ “As proposed the project fails the second criteria for a special exception in that this

⁶¹ CMP post-hearing brief, pages 10-11.

⁶² CMP post-hearing brief, page 10, footnote 40.

⁶³ Intervenor Group 4 proposed findings of fact, page 7.

⁶⁴ Hearing transcript, April 2, 2019, page 97.

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increased impact cannot be buffered from existing uses. The opportunity exists to improve rather than degrade the users' experience by relocating the trail in this area. [The Commission] should condition the granting of the special exception on a resolution of this issue between [CMP] and [Appalachian Trail] trail managers.”⁶⁵

The existing transmission line predates the Appalachian Trail and the P-RR subdistrict at the proposed location for the new crossing, and numerous transmission line structures are visible from the three areas where the proposed Project would cross the trail this area. CMP's easement to the United States of America for the Appalachian Trail states that the easement

...shall not be interpreted or exercised to, in any way, interfere with [CMP's] erection, construction, maintenance, repair, rebuilding, respacing, replacing, operation, patrol and removal of electric transmission, distribution and communication lines consisting of suitable and sufficient poles and towers with sufficient foundations, together with wires strung upon and extending between the same for the transmission of electric energy and intelligence, together with all necessary fixtures, anchors, guys, crossarms, and other electrical equipment and appurtenances, or the clearing and keeping clear Tract 108-04 of all trees, timber and bushes growing on said tract only by such means as [CMP] may select which do not interfere with the footpaths continuity or endanger hiker's passing along the footpath.⁶⁶

Although the proposed Project would increase the width of vegetative clearing in the transmission corridor and the height of the proposed transmission pole structures would be considerably higher than the existing transmission poles, the Commission finds that these conditions were contemplated at the time the easement was granted.

In consideration of all the evidence, the Commission concludes that the proposed Project, given the visibility of the existing transmission line, will be adequately buffered from those other uses and resources within the subdistrict with which it is incompatible, namely primitive recreational hiking on the Appalachian Trail, provided the vegetative planting described in CMP's "Joe's Hole (Moxie Pond) Planting Plan" is installed and maintained for the life of the project in accordance with Condition #2 of this Site Law Certification.

c. P-WL subdistrict buffering analysis and conclusions

The Wetland Protection subdistrict provides protection to areas that serve as important habitat for terrestrial and aquatic species.⁶⁷ Uses within P-WL subdistricts vary depending on the type of

⁶⁵ Intervenor Group 4 witness David Publicover, prefiled direct testimony, pages 3-4.

⁶⁶ CMP prefiled rebuttal testimony, CMP to USA Easement, exhibit CMP-9-B.

⁶⁷ Comprehensive Land Use Plan, page 235.

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wetland system. Examples of uses that occur within P-WL subdistricts include hunting, fishing, boating, bird watching, swimming, scientific research, and habitat for fish and wildlife.⁶⁸

Within Segment 1, the proposed Project would cross or traverse 480 freshwater wetlands and convert 8.23 acres of wetland to shrub-scrub wetland. Within Segment 2, the proposed Project would cross or traverse 147 freshwater wetlands and convert 1.13 acres of wetland to shrub-scrub wetland. Within Segment 3, the proposed Project would cross or traverse 227 freshwater wetlands and convert 5.65 acres of wetland to shrub-scrub wetland. The Department reviews all freshwater wetland impacts pursuant to the NRPA, which requires measures for avoidance and minimization of proposed wetland impacts and compensation for wetland impacts that are unavoidable.

Regarding the Commission's special exception criterion that the use can be buffered from those other uses and resources within the subdistrict with which it is incompatible, CMP stated,

A wetlands functions and values assessment [] was performed for the [proposed] Project and is included in Attachment 12 of the NRPA application. The [functions and values assessment] concluded that none of the functions or values identified within forested wetlands would be eliminated or significantly diminished by the conversion of forested wetlands to scrub-shrub and emergent wetlands, and that, on balance, there will be a positive net benefit with regards to functions and values. As a result, the construction of the transmission line in accordance with the methods described in Section 10 (Buffers) of the Site Law Application is consistent with the objective of the P-WL subdistrict.⁶⁹

CMP's proposed Post-Construction Vegetation Maintenance Plan describes the restrictive maintenance requirements for protected natural resources within the transmission line corridor and specifies that shrub and herbaceous vegetation will remain in place to the extent possible. The Post-Construction Vegetation Maintenance Plan identifies the following procedures to be implemented during vegetation maintenance activities to protect sensitive natural resources:

- Protected resources and their associated buffers will be flagged or located with a Global Positioning System prior to all maintenance operations;
- Hand-cutting will be the preferred method of vegetation maintenance within buffers and sensitive areas, where reasonable and practicable;
- Equipment access through wetlands or over streams will be avoided as much as practicable by utilizing existing public or private access roads, with landowner approval where required;

⁶⁸ A detailed discussion of wetland functions and values for areas that would be impacted by the proposed Project is included in section 12.0 of CMP's NRPA permit application.

⁶⁹ Site Law application, section 25.3.2.

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- Equipment access in upland areas with saturated soils will be minimized to the extent practicable to avoid rutting or other ground disturbance;
- Significant damage to wetland or stream bank vegetation, if any, will be repaired following completion of maintenance activities in the area; and
- Areas of significant soil disturbance will be stabilized and reseeded following completion of maintenance activity in the area.⁷⁰

The Post-Construction Vegetation Maintenance Plan provides that vegetation maintenance within, and within 25 feet of, freshwater wetlands with standing water will be conducted only by hand cutting with hand tools or chainsaws. Herbicides will not be used in Segment 1. In other segments, the Post-Construction Vegetation Maintenance Plan provides that herbicide use would occur in wetlands only when no standing water is present in the wetland at the time of the application.

To the extent that the proposed Project is incompatible with any resources in the P-WL subdistricts, the Commission finds that the proposed Project will be buffered from any such resources, provided CMP complies with the Post-Construction Vegetation Maintenance Plan as stipulated in Condition #3 of this Site Law Certification.

LAND USE STANDARDS

The Commission must determine whether the proposed Project meets any land use standards established by the Commission that are not considered in the Department's review under the Site Law.⁷¹

a. Vehicular Circulation, Access and Parking, Ch. 10, §§ 10.24(B) and 10.25(D)

In considering this land use standard, the Commission evaluates whether the proposal ensures adequate provision has been made for loading, parking and circulation of land; traffic movement in, on and from the site; and for assurance that the proposal will not cause congestion or unsafe conditions with respect to existing or proposed transportation arteries or methods.

⁷⁰ CMP's Post-Construction Vegetation Maintenance Plan, Site Law application exhibit 10-2, December 2018, page 3.

⁷¹ 12 M.R.S. § 685-B(1-A)(B-1).

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CMP stated:

There are approximately 125 miles of existing gravel roads primarily used for forest management that provide direct access to the Project from State Route 201 in Johnson Mountain Twp. Since the Project is an HVDC transmission line right of way, vehicular traffic would only result during construction (short-term) and maintenance (infrequent), and as such the Project is not expected to generate a significant amount of traffic. The Project will only access construction areas through the use public roads and existing land management roads. There will be no Level C road projects constructed in any P-RR subdistrict as a result of the Project.^[72]

Temporary, unpaved access roads through sections of the new transmission line corridor will need to be established for the clearing and construction phases of the Project. However, these access roads will be restored to pre-existing contours and revegetated once construction is complete and final restoration has been established. No new permanent roadways will be developed and project construction and maintenance related parking would primarily be in upland locations on the Project corridor or in existing developed areas. No on-street parking will be associated with this project.⁷³

CMP stated, “Poles will either be hauled in by truck or skidder or flown in via helicopter. In areas where access is suitable (e.g., level uplands near roads), trucks may be used. In areas with more difficult access, skidders or forwarders may be used to bring the poles to the proposed pole locations. In very remote areas or areas with extreme terrain, or during accelerated construction, helicopter transportation may be used.”⁷⁴

Access to the proposed Project for construction and maintenance would be over both public and private roadways. Public roadways may be under the jurisdiction of the Maine Department of Transportation, Franklin County, or Somerset County. Any vehicle transporting non-divisible loads

⁷² Level C Road Project means “[c]onstruction of new roads, and relocations or reconstruction of existing roads, other than that involved in level A or level B road projects; such roads shall include both public and private roadways excluding land management roads.” Ch. 10, § 10.02(112). Within P-RR subdistricts, Level C road projects may be allowed upon issuance of a permit as a special exception. Level A Road Project means “[r]econstruction within existing rights-of-way of public or private roads other than land management roads, and of railroads, excepting bridge replacements.” Ch. 10, § 10.02(110). Level A road projects are allowed without a permit subject to land use standards. Level B Road Project means “[m]inor relocations, and reconstructions, involving limited work outside of the existing right-of-way of public roads or private roads other than land management roads and of railroads; bridge reconstruction and minor relocations whether within or outside of existing right-of-way of such roads.” Ch. 10, § 10.02(111). Level B road projects are allowed upon issuance of a permit, subject to land use standards.

⁷³ Site Law application, section 25.4.3.

⁷⁴ NRPA application, section 7.2.1.6.

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in excess of legal dimension and weight limits on roads and bridges maintained by the Maine Department of Transportation must obtain an overlmit permit from the Department of the Secretary of State, Bureau of Motor Vehicles. Municipalities may have their own restrictions and permitting systems in place and would have to be checked individually. Access over privately owned roadways would be subject to individual landowner approval and any terms or conditions so stipulated.

The Commission concludes that the proposed Project adequately provides for loading, parking and circulation of traffic, in, on and from the site, and assurance that the proposal will not cause congestion or unsafe conditions, provided CMP complies with all applicable regulations of the Maine Department of Transportation, Franklin County, and Somerset County in accordance with Condition #4 of this Site Law Certification.

b. Subdivision and Lot Creation, Ch. 10, §§ 10.24(F) and 10.25(Q)

In considering this land use standard, the Commission evaluates whether the proposal to place a structure upon any lot in a subdivision and whether any divisions of land comply with the Commission's laws and rules governing subdivisions. "Subdivision" means a division of an existing parcel of land into 3 or more parcels or lots within any 5-year period, whether this division is accomplished by platting of the land for immediate or future sale, by sale of the land or by leasing."⁷⁵ A lot or parcel that when sold or leased created a subdivision requiring a permit from the Commission is not considered a subdivision lot and is exempt from the permit requirement if the permit has not been obtained and the subdivision has been in existence for 20 or more years.⁷⁶

CMP provided a 20-year land division history, prepared by Curtis Thaxter, LLC, for all parcels within the proposed Project area that are within the Commission's jurisdictional area, except for parcels within Moxie Gore. CMP stated that it "acquired most of the 300-foot wide corridor located in Moxie Gore in a deed from T-M Corporation dated November 10, 1988 and recorded in the Somerset County Registry of Deeds in Book 1480, Page 89. This transaction was part of a land exchange and boundary line agreement with T-M Corporation in which CMP reconfigured part of its ownership that dated back to the early 1900s. The remainder of the proposed corridor in Moxie Gore crosses land along the Kennebec River that CMP currently owns. This land was also acquired by several deeds in the early 1900s."⁷⁷ The land division history prepared by Curtis Thaxter, LLC concludes that no unauthorized land divisions appear to have occurred within the twenty-year review period.

The Commission finds that CMP's proposal does not include the development of any structures on lots that are part of a subdivision and that the land division history provided by CMP demonstrates that CMP has not created a subdivision. The Commission concludes that the proposed Project complies with Ch. 10, §§ 10.24(F) and 10.25(Q).

⁷⁵ 12 M.R.S. § 682(2-A).

⁷⁶ 12 M.R.S. § 682-B (5).

⁷⁷ Site Law application, section 25.4.1.

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c. Public's Health, Safety and General Welfare – Ch. 10, § 10.24

The burden is upon the applicant to demonstrate by substantial evidence that the criteria for approval are satisfied, and that the public's health, safety and general welfare will be adequately protected. In the context of utility facilities the applicant "generally must show that the proposed use[] will not burden local public facilities and services" including "fire and ambulance services."⁷⁸

The Maine State Federation of Firefighters ("Firefighters Federation"), in a letter dated February 12, 2019, expressed concerns regarding fire and other emergency response capacities within the proposed Project area. The Firefighters Federation has a membership of over 6,000 firefighters of which many are volunteers within small departments in rural communities. The Firefighters Federation stated:

Several of our volunteer members, who serve areas within the proposed NECEC Corridor, contacted us to express their concerns for fire and safety response. These concerns focus not only on the major construction phases of the project, but also on significant risks that will be established and which will continue to exist long after construction crews have left the area and wide areas of high voltage power lines cross their jurisdictions. Further conversations and investigation indicate that to date, no evaluation, assessment, or documentation of the fire, emergency medical, terrorism and other risks, or the services and equipment needed to mitigate those risks, have been formally identified, discussed, studied, and/or reported on.

...

The first 100 miles of the proposed Corridor, including the 70 miles covered by the [Maine Forest Service] and Rangers, has only three (3) volunteer departments within a one-mile (1-mile) buffer of the proposed Corridor. These are the Bingham, Anson, and Solon Volunteer Fire Departments. This area has no staffed fire services and daytime coverage is extremely limited.

South of Bingham, and still within Somerset County, there are three (3) additional fire departments [within] a two-mile (2-mile) buffer of the proposed NECEC transmission line. These are the volunteer departments of Starks, Madison, and Industry. Once again, these three additional departments have no staffed fire services and daytime coverage is extremely limited.

...

⁷⁸ Comprehensive Land Use Plan, § 4.3.E.

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Non-fire emergency medical services (EMS) paramedic response is provided by Upper Kennebec Valley Ambulance out of Bingham. Emergency transports are taken to Redington-Fariview [sic] Hospital, 35-miles away. Redington-Fariview [sic] hospital has a Lifeflight landing pad, with helicopter transport dispatched from Bangor, Lewiston, or Sanford, if available.

Concerns regarding the ability of emergency crews to respond to fires within the proposed Project in the Commission's jurisdiction were raised by Intervenor Group 2 and by members of the public.⁷⁹

CMP provided no evidence addressing the proposed Project's impact on fire and ambulance services. The Commission concludes that the public's health, safety and general welfare will be adequately protected provided CMP submits to the Commission, prior to commencing construction of the proposed Project, written agreement(s) with state, local, or private emergency services providers to ensure fire and emergency services are available at all times and at all locations of the proposed Project that are within the Commission's jurisdictional area during and following construction of the proposed Project in accordance with Condition #5 of this Site Law Certification.

d. Lighting – Ch. 10, § 10.25(F)

In considering this land use standard, the Commission evaluates whether the proposed activity will comply with standards for exterior light levels, glare reduction, and energy conservation.

CMP proposes no permanent operation of lights on transmission line structures installed within the Commission's jurisdiction. CMP does propose that temporary nighttime lighting may be necessary during construction of the proposed Project.

The Commission finds that temporary lighting proposed by CMP is anticipated to comply with the applicable standards and concludes that the proposed Project will comply with the lighting standards set forth at Ch. 10, § 10.25(F).

e. Activities in Flood Prone Areas – Ch. 10, § 10.25(T)

In considering this land use standard, the Commission evaluates whether all development in flood prone areas, including areas of special flood hazard, as identified by Flood Prone Area Protection subdistricts or Federal Emergency Management Agency Flood Boundary and Floodway, Flood Hazard Boundary or Flood Insurance Rate maps comply with the procedural requirements and development standards set forth in Ch. 10, § 10.25(T).⁸⁰

⁷⁹ Hearing transcript, April 2, 2019, pages 96, 202, 204; Hearing transcript, May 9, 2019, page 58; Hearing transcript, April 2, 2019 – Public Comment Session, pages 23, 37, 89, 106-107.

⁸⁰ The purpose and description of the Flood Prone Area Protection subdistrict is set forth in Ch. 10, § 10.23(C).

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CMP stated that the proposed Project would cross one Flood Prone Area Protection subdistrict in Appleton Township. The only portion of the proposed Project that crosses a flood hazard area mapped by the Federal Emergency Management Agency is in Concord Township. CMP proposes no transmission line structures within a Flood Prone Area Protection subdistrict or within mapped 100-year floodplains within the Commission's jurisdictional area.

The Commission concludes that the proposed Project will not directly impact or increase the risk of flooding and will comply with Ch. 10, § 10.25(T).

f. Dimensional Standards – Minimum Setbacks, Ch. 10, § 10.26(D)

The Commission's dimensional requirements for minimum setbacks apply to all lots on which structural development is proposed, unless otherwise provided by Ch. 10, § 10.26(G).

In CMP's proposal, no proposed structures are located within the applicable roadway setbacks (75 feet in all subdistricts, except 30 feet in Residential Development and General Development subdistricts).⁸¹

All infrastructure associated with the proposed Project within the Commission's jurisdictional area will be at least 75 feet from all side and rear property lines.

Ch. 10, § 10.26(D)(2)(a) establishes a setback of 100 feet from the nearest shoreline of a flowing water draining less than 50 square miles, a body of standing water less than 10 acres in size, or a coastal wetland, and from the upland edge of non-forested wetlands located in Wetland Protection (P-WL1) subdistricts. Ch. 10, § 10.26(D)(2)(b) establishes a setback of 150 feet from the nearest shoreline of a flowing water draining 50 square miles or more and a body of standing water 10 acres or greater in size.

CMP stated that “[t]ransmission line structures and guy wires will be positioned outside of the setback requirements to the fullest extent practicable. However, the design of the transmission line is constrained by both topography and the presence of natural resources and other features (e.g., roadways). The transmission line was designed to place transmission line structures such that they avoid natural resource impacts to the maximum extent practicable while maintaining necessary safety clearances for the overhead conductors.”⁸² As a result, CMP proposes 135 transmission line structures within the 100-foot shoreline setback due to the nature of the proposed Project, engineering constraints, and other design parameters.⁸³ CMP stated that only one transmission structure, Structure 3006-378, would be located within the 150-foot setback required by Ch. 10, § 10.26(D)(2)(b).

⁸¹ CMP's August 13, 2018, update to NRPA and Site Law Applications, page 5.

⁸² Site Law application, section 25.4.2.

⁸³ Structure numbers and the setback distances are provided in the table provided in CMP's August 13, 2018, update to NRPA and Site Law applications, page 6.

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CMP requested an exception to the minimum setbacks in accordance with Ch. 10, § 10.26(G)(5), which states, in part, “[a]n exception may be made to the shoreline, road, and/or property line setback requirements for structures where the Commission finds that such structures must be located near to the shoreline, road, or property line due to the nature of their use.” Pursuant to Ch. 10, § 10.26(G)(19), the Commission may reduce the minimum setback requirements for guy wire anchors provided such reduction will not result in unsafe conditions.

The Commission finds that the linear nature of the proposed Project and requirement to maintain minimum safety clearances for the overhead conductors results in the placement of transmission structures in locations that cannot meet the Commission’s default setback distances from certain water bodies. The Commission finds that CMP has attempted to design the proposed Project in such a way as to avoid conflict with the shoreline setbacks to the greatest extent practicable and that the 135 proposed transmission structures and guy wire placements that do not meet shoreline setbacks is an operational necessity and will not result in unsafe conditions. The Commission concludes that the proposed Project complies with applicable dimensional standards for minimum setbacks.

g. Dimensional Standards – Maximum Structure Height, Ch. 10, § 10.26(F)

Pursuant to Ch. 10, § 10.26(F)(1)(b), the maximum structure height for commercial, industrial, and other non-residential uses involving one or more structures is 100 feet. Pursuant to Ch. 10, § 10.26(F)(2), within 500 feet of the normal high water mark of a body of standing water 10 acres or greater, is 30 feet. Pursuant to Ch. 10, § 10.26(F)(3), features of structures which contain no floor area such as chimneys, towers, ventilators and spires and freestanding towers and turbines may exceed these maximum heights with the Commission's approval.

CMP stated:

Transmission line structure heights are determined during project design based on a number of parameters governed by the safety standards of the National Electric Safety Code. Specifically, for safe operation of the line, the transmission line must be designed in a manner that provides adequate clearance from the ground to the maximum sag of the transmission line. Structure locations are placed, to the extent practicable, in a manner that avoids and spans protected natural resources. Additionally, topographic constraints, the presence of existing utilities, and the span length needed to place structures outside of sensitive areas often requires transmission line structures to be taller than 100 feet.⁸⁴

CMP has identified a total of 96 transmission line structures within the Commission’s jurisdictional area that would exceed the maximum structure height of 100 feet.⁸⁵ Additionally, four structures in

⁸⁴ Site Law application, section 25.4.1.F.

⁸⁵ See Site Law application, Table 25-4 for a listing of proposed structures that would exceed 100 feet in height.

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the Merrill Strip Alternative would exceed the maximum structure height of 100 feet.⁸⁶ CMP does not propose any structures within 500 feet of a body of standing water 10 acres or greater.

The Commission finds that the proposed transmission structures contain no floor area and thus may exceed the 100-foot height limitation pursuant to Ch. 10, § 10.26(F)(3). The Commission concludes that the proposed Project is consistent with applicable dimensional requirements for maximum structure height.

h. Vegetative Clearing – Ch. 10, § 10.27(B)

The Commission has established vegetative clearing standards for areas within 250 feet of certain water bodies. Vegetation clearing activities not in conformance with these standards may be allowed upon issuance of a permit from the Commission provided that such types of activities are allowed in the subdistrict involved and that an applicant for such permit shows by a preponderance of the evidence that the proposed activity, which is not in conformance with the standards will be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area.

Pursuant to Ch. 10, § 10.27(B)(1), a vegetative buffer strip shall be retained within either 30 or 50 feet of the right-of-way of any public roadway, depending on the subdistrict involved, and within either 75 or 100 feet of the normal high water mark of standing and flowing water bodies, depending on the type of water body in proximity to proposed structures. The Department retains jurisdiction over vegetative clearing subject to the NRPA, including clearing adjacent to standing and flowing waters.

Within the vegetative buffer strip, Chapter 10 requires that there shall be no cleared opening greater than 250 square feet in the forest canopy, and selective cutting of trees is permitted provided that a well-distributed stand of trees and other natural vegetation is maintained.⁸⁷

In Segment 1 of the proposed Project, CMP proposes to clear a 150-foot wide strip of capable vegetation to accommodate the new transmission line. In Segments 2 and 3, CMP proposes to clear a 75-foot wide strip of capable vegetation to accommodate the new transmission line.

Relating to road buffers, CMP stated,

Due to the nature of the [proposed] Project, the buffer strips identified in [Ch. 10,] § 10.27, B will be retained but the Project cannot conform to the selective cutting requirements associated with the maintenance of vegetation ([Ch. 10,] § 10.27, B, 2). The Project will maintain vegetative buffers in all scenarios but these buffers will not include capable vegetation that could grow to heights that would grow into the conductor

⁸⁶ Site Law amendment application, section 25.3.

⁸⁷ The Commission's rating system for a well-distributed stand of trees is set forth in Ch. 10, § 10.27(B), Table 10.27(B-1).

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safety zone of the transmission line. A description of buffers and CMP vegetation clearing and maintenance practices is included in Section 10 of the Site Law application.⁸⁸

Section 10 of CMP's Site Law application describes the proposed natural resource buffers and clearing guidelines CMP will employ for the proposed Project. CMP stated that all tree species capable of growing into the conductor safety zone must be removed from the buffers during construction and be prevented from re-establishing during periodic scheduled vegetation maintenance operations. Selective transmission line corridor management techniques are discussed in Section 10 of the Site Law application and have also been incorporated into CMP's Construction Vegetation Clearing Plan and CMP's Post-Construction Vegetation Management Plan. The objective of CMP's proposed vegetative buffer management plan "is to maintain ecological values of resources without sacrificing the operational safety of the electric transmission line and associated conductors."⁸⁹ CMP proposes mechanized clearing, including motorized equipment, to prepare the corridor for construction. However, for periodic maintenance of the corridor, CMP testified that it "practices integrated vegetation management [], including the selective use of herbicides, to safely and effectively maintain its transmission line corridors in a scrub/shrub cover."⁹⁰ Within Segment 1, CMP testified that it will not apply herbicides but instead utilize mechanical methods for vegetation maintenance on this portion of the proposed Project.⁹¹ For portions of the proposed Project in which vegetative tapering is proposed or required, CMP stated that mechanized methods, primarily chainsaws, would be used to selectively remove capable vegetation.

CMP's Site Law application section 10.3, Buffer and Resource Protection Concepts, identifies that vegetative buffers are designed to:

- Prevent soil erosion and sedimentation of surface waters;
- Slow the velocity, increase the infiltration, and otherwise remove sediment and other contaminants in runoff before it enters surface waters;
- Reduce access of all-terrain vehicles to streams;
- Provide shade, to reduce the warming effect of sunlight (insolation) on water; and
- Provide cover and habitat for wildlife that use riparian and significant habitats.

CMP's proposed Construction Vegetation Clearing Plan specifies restrictive vegetation management requirements for sensitive areas within the proposed Project area including:

⁸⁸ Site Law application, section 25.4.6.

⁸⁹ Site Law application, section 10.2.

⁹⁰ CMP Witness Gerry Mirabile, supplemental testimony, page 4.

⁹¹ CMP Witness Gerry Mirabile, supplemental testimony, page 5.

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- Wetlands and streams;
- Perennial streams within designated Atlantic salmon habitat;
- Significant vernal pools;
- Inland waterfowl and wading bird habitat;
- Deer wintering areas;
- Rare plant locations; and
- Locations over mapped significant sand and gravel aquifers.

On January 30, 2019, CMP submitted revisions to its Construction Vegetation Clearing Plan and Post-Construction Vegetation Management Plan to incorporate 100-foot buffers on perennial streams located in Segment 1, including all coldwater fisheries, waterbodies containing special concern, threatened, and/or endangered species, and outstanding river segments; and 75-foot buffers on all other streams. In addition, CMP proposes to employ tapered vegetation management areas to minimize the visual impact of the proposed Project from the summit of Coburn Mountain in Upper Enchanted Township and from Rock Pond in T5 R6 BKP WKR.

The Commission concludes that the proposed Project will be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area provided CMP adheres to the vegetative clearing and maintenance as described its Construction Vegetation Clearing Plan and Post-Construction Vegetation Management Plan in accordance with Condition #3 of this Site Law Certification.

i. Pesticide Application – Ch. 10, § 10.27(I)

Pursuant to Ch. 10, § 10.27(I), pesticide application in any of the subdistricts will not require a permit from the Commission provided such application is in conformance with applicable state and federal statutes and regulations.

CMP proposes to use herbicide applications after initial clearing of the corridor is completed to gain control of vegetation growth. When control is achieved, treatment will typically occur as part of scheduled maintenance on a 4-year cycle or as needed to discourage the establishment of capable tree species. CMP would not use herbicides within the 53.5 miles of new corridor in Segment 1 of the proposed Project. For the remainder of the line, CMP stated that “[h]erbicides will be selectively applied to capable species, using low-pressure (hand-pressurized) backpack applicators, to prevent growth of individual capable specimens and to prevent regrowth of cut capable specimens. Individual capable specimens will be treated with herbicides, and no broadcast application will be done. CMP will not use herbicides within 25 feet of any waterbody or standing water. In addition, CMP will not use herbicides within 100 feet of a known well or spring or within 200 feet of any

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known public water supply.”⁹² CMP also stated that “[h]erbicides will be used in strict accordance with the manufacturer’s [United States Environmental Protection Agency]-approved labeling and will not be applied directly to waterbodies or areas where surface water is present.”⁹³

The Commission concludes that the proposed use of herbicides complies with the Commission’s land use standards for pesticide application.

j. Signs – Ch. 10, § 10.27(J)

The Commission’s regulations pertaining to signs, set forth in Ch. 10, § 10.27(J)(2), establishes standards to ensure placement of signs does not produce undue adverse impact upon the resources and uses in the area.

CMP does not propose to install signs as part of the proposed Project within the Commission’s jurisdictional area. Traffic control signs and directional signs utilized during the proposed Project construction would be limited and temporary and do not require a permit pursuant to Ch. 10, § 10.27(J)(1)(d).

The Commission concludes that the proposed Project will comply with the Commission’s land use standards for signs.

FINAL CONCLUSIONS

1. The proposed Project is an allowed use in the General Development, Residential Development, General Management, Flood Prone Protection, Fish and Wildlife Protection, Great Pond Protection, and Shoreland Protection subdistricts.
2. The proposed Project is an allowed use in the Recreation Protection subdistricts provided CMP installs and maintains for the life of the project the vegetative plantings described in CMP’s “Joe’s Hole (Moxie Pond) Planting Plan” within the Recreation Protection subdistrict surrounding the Appalachian Trail.
3. The proposed Project is an allowed use in the Wetland Protection subdistricts provided CMP complies with its proposed Construction Vegetation Clearing Plan and Post-Construction Vegetation Maintenance Plan.

⁹² Site Law application, section 15.2.

⁹³ Site Law application, exhibit 10-1, section 2.2.

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4. The proposed Project complies with all applicable sections of the Commission's land use standards provided CMP:
 - a. secures all necessary approvals from the Maine Department of Transportation, Franklin County, and Somerset County for the transportation of materials during and following construction of the proposed Project; and
 - b. submits, prior to construction, written agreement(s) with state, local or private emergency services providers to ensure fire and emergency services are available at all times and at all locations of the proposed Project that are within the Commission's jurisdiction during and following construction of the proposed Project.
5. The proposed Project is consistent with the policies of the Comprehensive Land Use Plan without additional conditions.

Therefore, the Commission CERTIFIES to the Maine Department of Environmental Protection that Site Law Certification SLC-9 for Central Maine Power's proposed New England Clean Energy Connect Project, as proposed, complies with the relevant provisions of the Commission's rule Chapter 10, subject to the findings of fact, conclusions, and conditions contained herein.

CONDITIONS

1. CMP shall, for the life of the project, maintain a vegetative buffer at the Kennebec River necessary to provide visual screening (buffering) of all transmission line structures from the Recreation Protection subdistrict.
2. CMP shall install and for the life of the project maintain the vegetative plantings described in CMP's "Joe's Hole (Moxie Pond) Planting Plan" within the Recreation Protection subdistrict surrounding the Appalachian Trail.
3. CMP shall comply with its Construction Vegetation Clearing Plan and Post-Construction Vegetation Management Plan.
4. CMP shall secure all necessary approvals from the Maine Department of Transportation, Franklin County, and Somerset County for the transportation of materials during and following construction of the proposed Project.
5. Prior to construction, CMP shall submit to the Land Use Planning Commission, written agreement(s) with state, local or private emergency service providers to ensure fire and emergency services are available at all times and at all locations of the proposed Project within the Commission's jurisdiction during and following construction of the proposed Project.

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Pursuant to Ch. 4 § 4.11(12)(b), a determination to approve or deny a request for certification of a Site Law application pending before the Maine Department of Environmental Protection is not final agency action and is not appealable except as part of the Department of Environmental Protection permitting decision.

DONE AND DATED AT ORONO, MAINE, THIS 8th DAY OF JANUARY 2020.



Everett Worcester, Chair



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

1. *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.

III. 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.

USACE Permit



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
696 VIRGINIA ROAD
CONCORD MA 01742-2751

NOVEMBER 04, 2020

Regulatory Division
File No. NAE-2017-01342

Mr. Gerry Mirabile
Central Maine Power Company
83 Edison Drive
Augusta, Maine 04336

Dear Mr. Mirabile:

This correspondence is in regard to your Department of the Army (DA) permit for the discharge of fill material into waters of the U.S. and work under a navigable water of the U.S. associated with the New England Clean Energy Connect (NECEC) power line project within the State of Maine. This project has been assigned number NAE-2017-01342. Please refer to this number in all communication concerning this matter.

On August 19, 2020, you were sent an initial proffered DA permit for the proposed work. Enclosed is a *proffered* DA permit revised to reflect additional endangered species consultation with the U.S. Fish & Wildlife Service and in response to your August 31, 2020 letter of objection to the initial proffered permit.

If you have no objections to the revised permit, please sign, date, and return both copies to this office for validation. The signed permit should be returned as soon as possible. In addition, please submit to this office a \$100.00 check, payable to "FAO New England District" and noting file NAE-2017-01342. Upon receipt of the signed copies and check, the permit will be validated and returned to you without delay. Your DA permit will not be valid until we have returned a copy to you bearing both your signature and the signature of the appropriate Corps official.

This permit is a limited authorization containing a specific set of conditions. Please read the permit thoroughly to familiarize yourself with those conditions, **including any conditions contained on the enclosed state water quality certification.** If a contractor does the work for you, both you and the contractor are responsible for ensuring that the work is done in compliance with the permit's terms and conditions, as any violations could result in civil or criminal penalties.

A combined Notification of Administrative Appeal Options and Process (NAP) and Request for Appeal (RFA) form, and flow chart explaining the appeals process and your options, are enclosed. If you desire to appeal this proffered permit, you must submit a completed RFA form along with any supporting or clarifying information to:

-2-

James Haggerty; Operations Program Manager; North Atlantic Division, Corps of Engineers; North Atlantic Fort Hamilton Military Community, Bldg. 301; General Lee Avenue; Brooklyn, NY 11252-6700. Contact info: (347)-786-1434 or James.W.Haggerty@usace.army.mil.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by January 4, 2021. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You may not appeal conditions contained in the State water quality certification or the CZM consistency determination under this program as they are automatically included in the Federal permit. This authorization does not obviate the need to obtain other Federal, state, or local authorizations required by law.

We continually strive to improve our customer service. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

If you have any questions regarding this correspondence, please contact Jay Clement at 207-623-8367 at our Augusta, Maine Project Office.

Sincerely,

ATILANO.JOHN.ANTHON
Y.II.1172226082

Digitally signed by
ATILANO.JOHN.ANTHON.Y.II.1172226082
Date: 2020.11.04 12:16:32 -05'00'

John A. Atilano II
Colonel, Corps of Engineers
District Engineer

Enclosures

cc:

Laura Teracino, U.S. Environmental Protection Agency Region 1, teracino.laura@epa.gov
Mike Marsh, U.S. Environmental Protection Agency Region 1, marsh.mike@epa.gov
Wende Mahaney, U.S. Fish & Wildlife Service, wende_mahaney@fws.gov
Melissa Pauley, U.S. Department of Energy, melissa.pauley@hq.doe.gov
James Beyer, Maine Dept. of Environmental Protection; Jim.R.Beyer@maine.gov

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Central Maine Power Company		File Number: NAE-2017-01342	Date: 6 November 2020
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
X	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
	APPROVED JURISDICTIONAL DETERMINATION	D	
	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/appeals.aspx> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

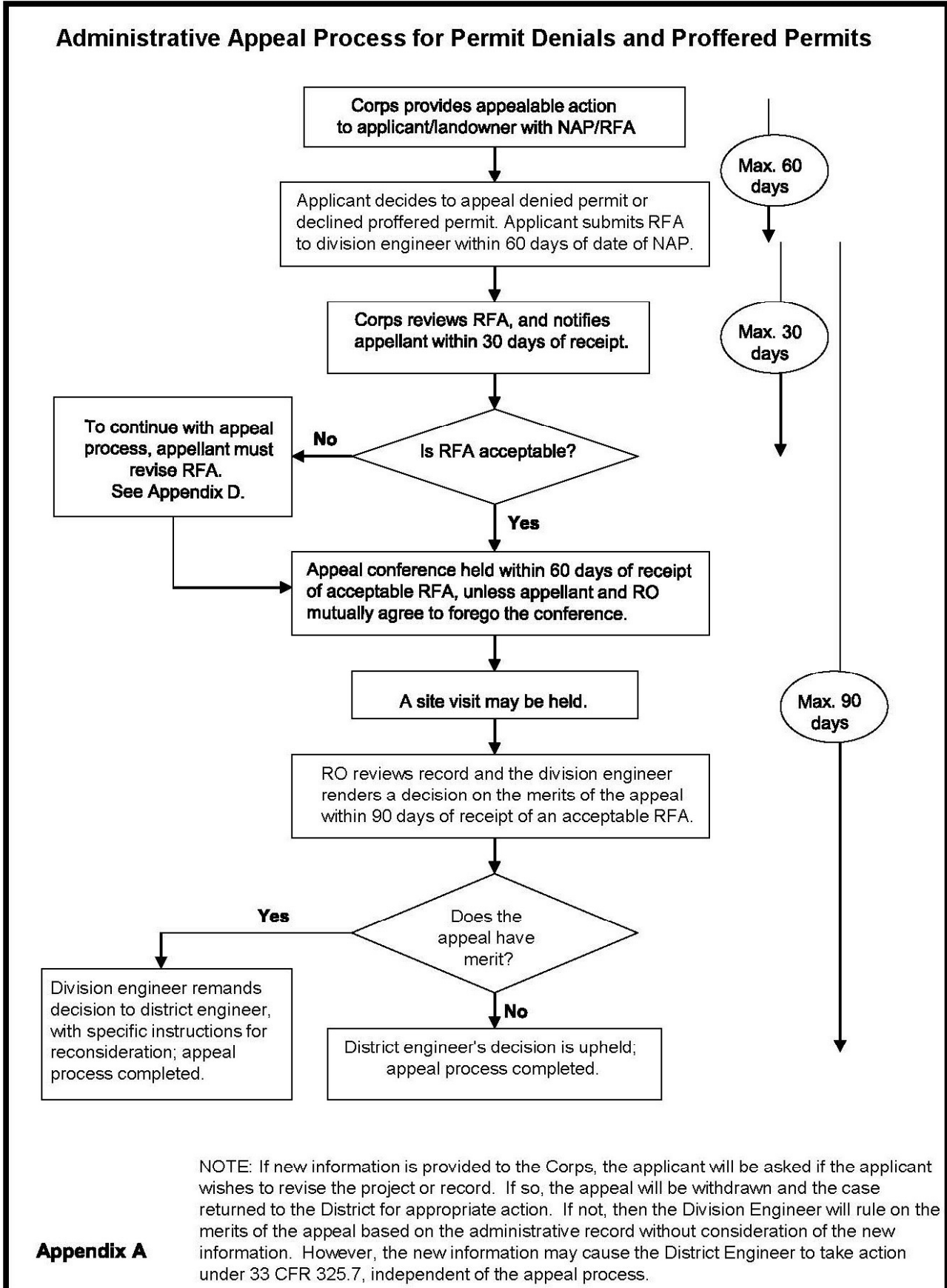
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
 Mr. Jay Clement
 Senior Regulatory Project Manager (CENAE-RDC)
 U.S. Army Corps of Engineers, New England District Maine Project Office
 442 Civic Center Drive, Suite 350
 Augusta, ME 04330
 Telephone number: 207-623-8367

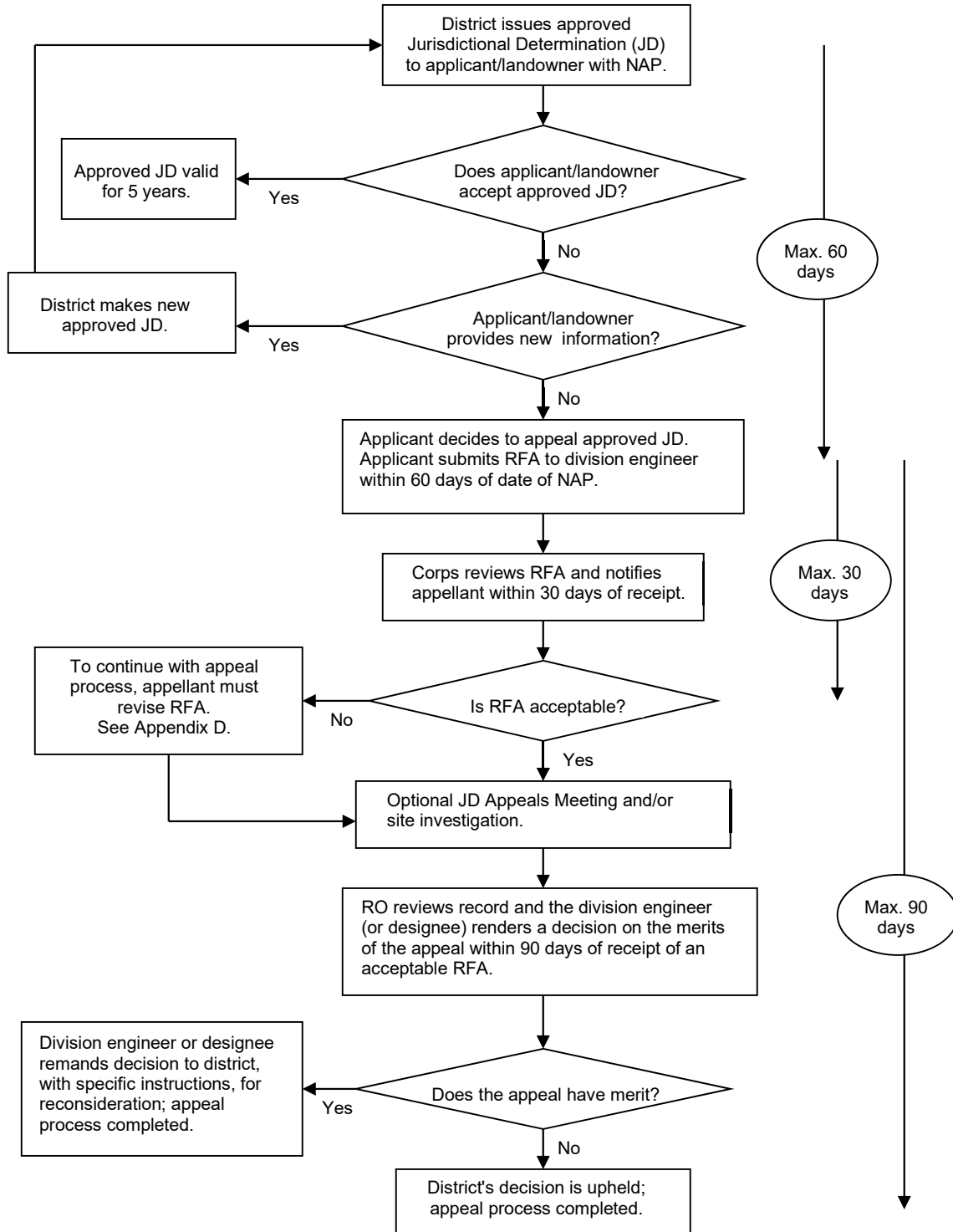
If you only have questions regarding the appeal process you may also contact:
 Mr. James W. Haggerty
 Regulatory Program Manager (CENAD-PD-OR)
 U.S. Army Corps of Engineers
 Fort Hamilton Military Community
 301 General Lee Avenue
 Brooklyn, New York 11252-6700
 Telephone number: 347-370-4650

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:
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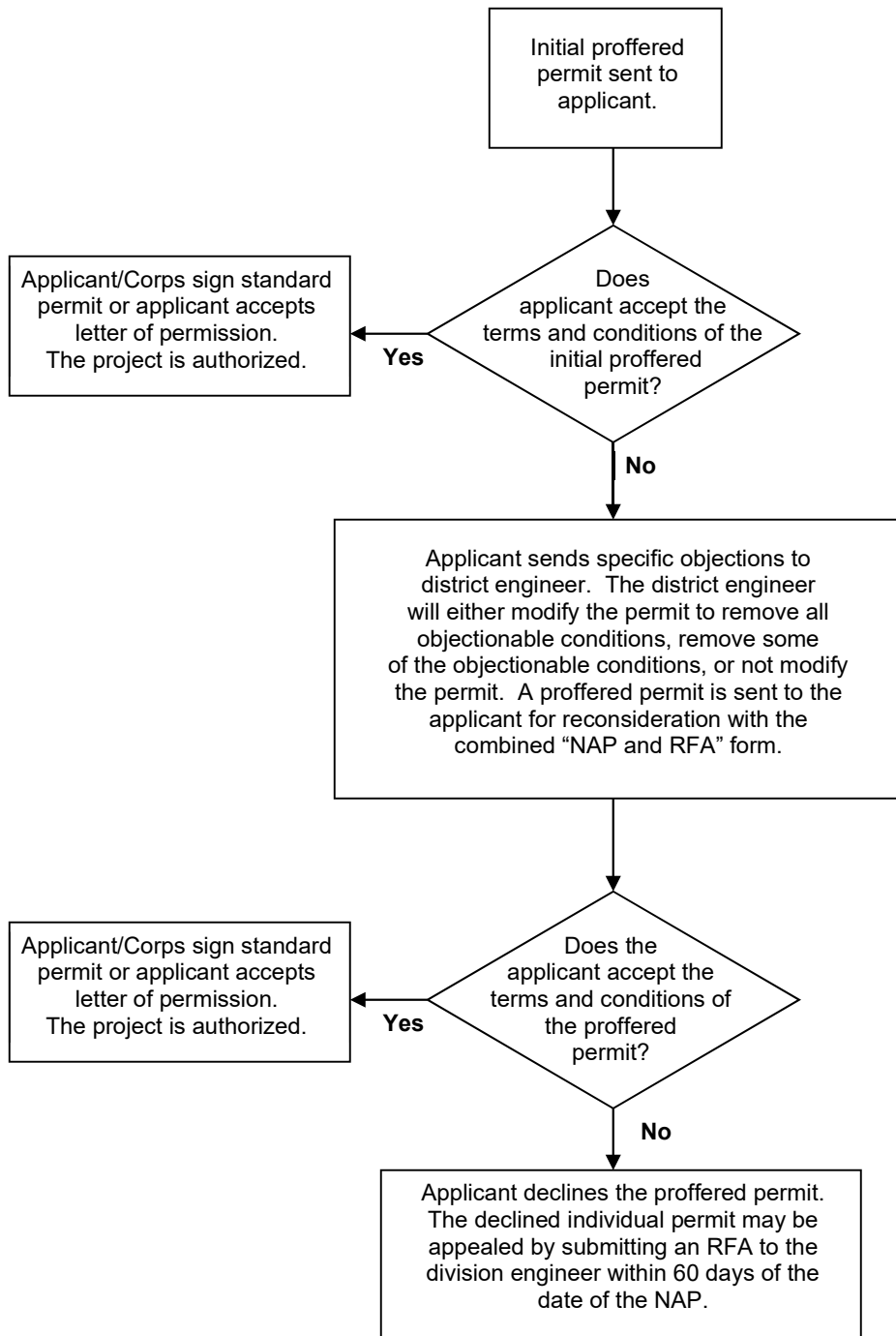


Administrative Appeal Process for Approved Jurisdictional Determination



Appendix C

Applicant Options with Initial/Proffered Permit



DEPARTMENT OF THE ARMY PERMIT

Permittee Central Maine Power Company, 83 Edison Drive, Augusta, Maine 04330

Permit No. NAE-2017-01342

Issuing Office New England District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Place temporary and permanent fill in waters of United States between Beattie Township at the Maine/Quebec border and Lewiston, Maine in order to construct a new High Voltage Direct Current (HVDC) electrical transmission line and related facilities capable of
Project Description Continued on Page 4

This work is shown on the attached plans entitled "New England Clean Energy Connect" in 17 sheets dated "6/25/20"; six sheets updated "4/11/17"; and "Central Maine Power" in seven sheets dated "8/6/2018"; and with the construction plans submitted with application and otherwise amended.

Project Location:

Multiple locations from Beattie Township to Lewiston, Maine

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2025. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The permittee shall ensure that a copy of this permit is at the work site (and the project office) authorized by this permit whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of USACE jurisdiction.

Further Information:

1. **Congressional Authorities:** You have been authorized to undertake the activity described above pursuant to:

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

Section 404 of the Clean Water Act (33 U.S.C. 1344).

Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. **Limits of this authorization.**

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. **Limits of Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.

Project Description Continued from Page 1

delivering up to 1,200 megawatts of electrical power from hydroelectric sources in Quebec to the New England Control Area, specifically in response to a Request for Proposals for Long-Term Contracts for Clean Energy Projects from the State of Massachusetts.

The project area encompasses six Maine counties and 38 municipalities or townships. Approximately 53.1 miles of the new line, from the Canadian border to the Forks, will be located within a previously undeveloped, 300-foot-wide transmission line corridor, only 150' of which will be affected. The remainder of the 144.9 miles of transmission line from the Forks to Lewiston will be installed within existing transmission corridors. The new line will be installed beneath the upper Kennebec River via horizontal directional drilling (HDD). All other waterway and/or wetland crossings will be aerial.

Work will result in direct and indirect, permanent and temporary impacts to a navigable water of the US and freshwater wetlands associated with the construction of the HVDC transmission line, substation and converter station work, the HDD installation, and rebuilds of existing transmission lines. A total of 4.87 acres of wetland will be permanently impacted and 47.68 acres will be temporarily impacted. An additional 111.55 acres of forested wetlands will be affected by clearing and conversion to scrub-shrub and emergent cover types. There are no activities within stream resources that are authorized by this permit.

This work in waters will take place at separate and distinct locations within the following components:

Segments 1, 2, & 3 – HVDC Components and Associated Alternating Current (AC) Upgrades

- New 144.9-mile +/-320 kilovolt (kV) HVDC transmission line from the Canadian border to a new converter station located north of Merrill Road in Lewiston, with 53.1 miles of the 144.99 miles in a new corridor from the Canadian border to The Forks Plantation (Segment 1). The HVDC transmission line will also pass beneath the Kennebec River via a horizontal directional drill (HDD), which will require termination stations on each side of the river in Moxie Gore and West Forks;
- New 1.2-mile 345kV transmission line from the new Merrill Road Converter Station to the existing Larrabee Road Substation;
- Partial rebuild of 0.8 mile of 34.5kV Section 72 AC transmission line outside of the Larrabee Road Substation to make room in the corridor for the 1.2-mile, 345kV Transmission Line;

Project Description Continued on Page 5

Project Description Continued from Page 4

- New +/-320kV HVDC to 345kV HVAC 1200 Megawatt (“MW”) Merrill Road Converter Station;
- Addition of 345kV transmission line terminal at the existing Larrabee Road Substation; and
- Partial rebuild of 115kV Sections 200 and 251 AC transmission lines, consisting of 1.37 and 0.46 miles, respectively, in the town of Greene to make room for a 1.16-mile section of the +/- 320kV HVDC transmission line described above.

Segment 4 – 345kV STATCOM (Static Synchronous Compensator) Substation and 115kV Rebuilds

- New 345kV +/-200MVAR (Mega Volt Amps (reactive)) STATCOM Fickett Road Substation;
- New 0.3-mile 345kV AC transmission line from the existing Surowiec Substation in Pownal to the new STATCOM Substation on Fickett Road in Pownal;
- Rebuild 16.1 miles of 115kV Section 64 AC transmission line from the existing Larrabee Road Substation to the existing Surowiec Substation; and
- Rebuild 9.3 miles of 115kV Section 62 AC transmission line from the existing Crowley’s Substation in Lewiston to the existing Surowiec Substation.

Segment 5 – New 345kV Transmission Line and Associated Rebuilds

- New 26.5-mile 345kV AC transmission line from the existing Coopers Mills Substation in Windsor to the existing Maine Yankee Substation in Wiscasset;
- Partial rebuild of 0.3 mile of 345kV Section 3025 between Larrabee Road Substation and Coopers Mills Substation;
- Partial rebuild of 0.8 mile of 345kV Section 392 between Maine Yankee Substation and Coopers Mills Substation; and
- Partial rebuild of 0.8 mile each of 115kV Section 60/88 outside of Coopers Mills

Special Conditions Continued from Page 2

If the permit is issued after the construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. If the permit is issued after receipt of bids or quotes, the entire permit shall be included in the contract or sub-contract as a change order. The term “entire permit” includes permit

Special Conditions Continued on Page 6

Special Conditions Continued from Page 5

amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

2. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least four weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).

3. The permittee shall implement all terms and conditions contained in the attached water quality certification from the Maine Dept. of Environmental Protection dated "May 11, 2020" and the Maine Land Use Regulation Commission Final Development Plan Permit dated "January 8, 2020". Copies of all required submittals shall also be provided to the USACE.

4. In order to fulfill the requirements of Section 106 of the National Historic Preservation Act of 1966, the permittee shall implement the stipulations contained in the attached Memorandum of Agreement signed "June 19, 2020".

5. The permittee shall generate 60.307 wetland credits by means of preservation in accordance with the attached mitigation plan entitled, "Compensation Plan" and updated "July 2020". Prior to any work commencing, for each Corps mitigation site, the permittee shall provide a Corps-approved: site protective instrument; and long-term management plan. The long-term management plan will identify the long-term steward and provide evidence that an escrow has been established or a letter from the long-term steward stating that stewardship fund is not required to provide the long-term management as outlined in the long-term management agreement.

6. In addition to the permittee-responsible mitigation, the permittee shall purchase 13.361 In-Lieu Fee credits from the Maine Natural Resource Conservation Fund. As of the date of this permit, the current cost to purchase these credits is \$3,046,648.37. The permittee must send a cashier's check or bank draft for this amount to: ME DEP, Attn: ILF Program Administrator, State House Station 17, Augusta, ME 04333. The check must include the USACE file number "NAE-2017-01342" and the statement: "For ILF account only".

Special Conditions Continued on Page 7

Special Conditions Continued from Page 6

No impacts authorized by this permit shall begin until the USACE receives a copy of the letter from the Maine Department of Environmental Protection (ME DEP) to the permittee stating that the ME DEP has received the check and accepts responsibility for mitigation. The in-lieu fee amount is valid for one year from the date of this permit and is subject to change.

7. Prior to being onsite, the contractor(s) shall thoroughly inspect and remove seeds, plant material, soil, mud, insects, and other invertebrates on all equipment, including construction mats, to be used on the project site to prohibit introduction of invasive organisms. At a minimum, the following shall be inspected and cleaned on terrestrial vehicles where applicable:

Rubber-Tired Vehicles - Crevices in upper surface and panels, tires, rims, and fender wells, spare tire mounting area, bumpers, front and rear quarter panels, around and behind grills, bottom of radiator vent openings, brake mechanisms, transmission, stabilizer bar, shock absorbers, front and rear axles, beds, suspension units, exhaust systems, light casings, and mirrors.

Tracked Land Vehicles - Crevices in upper surface and panels, top of axles and tensioners, support rollers, between rubber or gridded areas, beneath fenders, hatches, under casings, and grills.

Interiors of All Vehicles - Beneath seats, beneath floor mats, upholstery, beneath foot pedals, inside folds of gear shift cover.

8. Prior to construction in any areas in which the final design plans deviate from the approved design plans, the permittee shall submit the final design plans to the Corps for review and approval.

9. Except where stated otherwise, reports, drawings, correspondence and any other submittals required by this permit shall be marked with the words "Permit No. (NAE-2017-01342)" and submitted via: a) MAIL: PATS Branch - Regulatory Division, Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751; b) EMAIL: jay.l.clement@usace.army.mil and cenae-r@usace.army.mil; or c) FAX: (978) 318-8303. Documents which are not marked and addressed in this manner may not reach their intended destination and do not comply with the requirements of this permit. Requirements for immediate notification to the Corps shall be done by telephone to (978) 318-8338.

Special Conditions Continued on Page 8

Special Conditions Continued from Page 7

U.S. Army. Corps of Engineers Permit No. NAE-2017-01342
Permit Special Conditions Resulting From
Informal Endangered Species Act Consultation
Between the US Army Corps of Engineers and
the US Fish & Wildlife Service (USFWS)
(Reference USACE Biological Assessment (BA) dated "June 23, 2020")

Provided below are the conditions based on informal consultation with the USFWS to minimize effects to threatened and endangered species and their critical habitat within the Action Area as defined by the USACE.

1. Adequate sedimentation and erosion control devices, such as geo-textile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work but not before stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland. Erosion controls, temporary access ways, and crane mats will be installed in accordance with CMP's Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects ("Environmental Guidelines"), included in Exhibit B entitled "Environmental Guidelines For Construction and Maintenance Activities on Transmission Line And Substation Projects" last revised "June 29, 2018" which is contained in the administrative record.
2. Prior to any tree clearing or construction activities, the NECEC team shall walk the length of the transmission line with the construction contractors to identify critical areas where construction and construction access may be difficult due to terrain, wetlands, and water course conditions, or the location of protected or sensitive natural resources. Erosion control placement, access road layout, wetlands, and stream crossing locations shall be addressed with the construction contractors, with avoidance and minimization of wetland and waterbody impacts a priority. The type and location of erosion controls as well as the approach to wetlands, stream crossings and other protected or sensitive natural resources, shall be communicated to the construction contractors during the initial walk-through. Access areas and environmental resources shall be flagged with a specified color of surveyor tape as identified in Table 2-4 of the BA, and "no-access or special restriction" areas (such as certain stream buffers) will also be marked using appropriate color-coded tape. Flagging and any special management or protection requirements associated with federally-listed species shall be highlighted during the pre-construction walk through.

3. The permittee shall implement all terms and conditions contained in the water quality certification from the Maine Dept. of Environmental Protection dated "May 11, 2020" and subsequent revisions. Copies of all required submittals shall also be provided to the Corps and DOE.
4. For unavoidable stream crossings, crane mats or other means shall be used to span the streams. (See Section 4.0 Installation of Crossings within Exhibit B). Appropriate erosion controls will be installed at each stream crossing including water bars used in conjunction with sediment traps in addition to sediment barriers located upstream and downstream on both sides of the crossing (see Figure 2-5 of the BA). Where necessary, construction mats will be placed on the upland, parallel to the ordinary high water line as abutments to further protect stream banks and to establish stability. Streams that are too wide to cross by spanning with crane mats or I-beams combined with crane mats will be avoided. Under no circumstances (including in all intermittent and perennial streams within the Atlantic salmon GOM DPS and those that provide critical habitat for Atlantic salmon), will any stream crossing technique be used that involves in-stream work or the discharge of temporary or permanent fills.
5. All wetland and waterbody crossings will be restored to preconstruction conditions; any material or structure used at temporary crossings will be removed; and the banks will be stabilized and revegetated consistent with the NECEC Environmental Guidelines. Stream crossings shall be removed as soon as they are no longer needed for construction activities. All restored stream crossings will be inspected, either as part of the final project inspection or earlier, with particular attention paid to erosion and sedimentation issues and regrowth of riparian vegetation.
6. No in-water construction work is authorized within any stream, either intermittent or perennial. This includes both temporary and permanent work. Furthermore, the permittee shall implement protections within a 100-foot riparian buffer of all intermittent and perennial streams within the GOM DPS. This is further discussed in Section 5.1, page 82 of the BA.
7. Any span structures on all intermittent and perennial streams shall be installed and maintained to prevent soil and other material from washing into the stream. This shall include cleaning the travel surface of the span to prevent accumulated material from washing into the stream. At each of these crossings, clearing of non-capable woody vegetation shall be minimized to the maximum extent practicable and the roots allowed to remain in order to reduce indirect impacts and to promote natural re-vegetation.
8. For all transmission line poles located within the 100-foot buffer of all streams within the GOM DPS, a site specific erosion and sediment control plan, designed to minimize the potential for secondary impacts to the stream, shall be submitted to the Corps for review and approval prior to installation of poles.

9. To minimize the spread of invasive plant species within the Project, all off-road equipment and vehicles (operating off of existing open and maintained roads) must be cleaned prior to entering the construction site to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants. All equipment will be inspected prior to off-loading to ensure that they are clean.
10. All areas of wetlands which are disturbed during construction shall be restored to their approximate preconstruction elevation (but not higher) and condition by careful protection, and/or removal and replacement, of existing soil and vegetation. In addition, if upland clearing, grubbing, or other construction activity results in, or may result in, soil erosion with transport and deposition into wetlands or waterways, devices such as geotextile silt fences, sediment trenches, etc., shall be installed and properly maintained to minimize such impacts during construction. These devices, with the exception of erosion control mix, must be removed upon completion of work but not before stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to waterway or wetland.
11. No temporary fill (e.g., access roads, cofferdams) may be placed in waters or wetlands unless specifically authorized by this permit. If temporary fill is used, it shall be disposed of at an upland site and suitably contained to prevent its subsequent erosion into a water of the U.S., and the area shall be restored to its preconstruction contours (but not higher) and character upon completion of the project. During use, such temporary fill must be stabilized to prevent erosion.
12. Pull-pads for conductor installation shall only be located in Atlantic salmon 100-foot stream buffer zones when there is no practicable alternative. Grubbing and grading within the stream buffer will be kept to the minimum necessary and will only occur after installation of an additional row of erosion and sedimentation controls between the area of disturbance and the stream. After removal of the pull-pad, the stream buffer will be restored to its original grade and stabilized to prevent erosion while the riparian zone becomes revegetated. Plantings will be installed as necessary to ensure the riparian zone vegetation is adequately restored.
13. All construction areas shall be open for inspection by the permitting agency(ies) as well as federal resource agency personnel during working hours.
14. The permittee shall take all reasonable and prudent measures to minimize the risk of accidental spills of petroleum or other hazardous contaminants from construction equipment at waterway and wetland crossings. Minimum specific spill management measures are contained in Exhibit B of the BA.

15. Initial tree clearing and long-term vegetation maintenance, which will be performed in accordance with the NECEC Construction Vegetation Clearing Plan (VCP) and Post-Construction Vegetation Maintenance Plan (VMP) provided in Exhibit C and D of the BA, respectively and updated on June 25, 2020.

16. Clearing and maintenance of Segment 1 shall include a 39.02-mile-long, 54-foot-wide, cleared, scrub-shrub maintained portion of the ROW, with tapered vegetation beyond at 16-foot intervals. The forested intervals shall have height steps of 15 feet, 25 feet and 35 feet as one moves from the edge of the 54-foot-wide area to the edge of the 150-foot corridor, except in specific areas where the Project will maintain either full height canopy vegetation, vegetation with a minimum height of 35 feet, or taller vegetation managed for deer travel corridors. The Maine DEP has established several Wildlife Areas where vegetation will be maintained in a forest condition for the full width of the Right of Way (ROW) over the 14.08 miles of the 53.1-mile Segment 1. The identified areas with a required minimum vegetation height of 35 feet are listed in Exhibit C of the BA.

17. The permittee shall conduct all tree cutting between October 16 and April 19 of any year to the maximum extent practicable and **no tree cutting shall occur between June 1 and July 31 of any year** to minimize potential impacts to federally threatened northern long-eared bats.

18. For each successive year of construction beyond 2020 until project completion, the permittee shall submit to the Corps and the US Fish & Wildlife Service an updated Official Species List from the IPaC website: <https://ecos.fws.gov/ipac/> The updated species list shall be obtained and submitted between January 1 and January 31 of each year. Concurrently, the permittee shall update and resubmit the streamlined consultation form for NLEB to the Corps and the Fish and Wildlife Service. If any new species are federally listed before the NECEC project is completed, the Corps shall re-initiate Section 7 consultation with the Service as necessary to evaluate, avoid, and minimize effects from any construction not completed.

19. In accordance with Exhibit B entitled "Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects" last revised "June 29, 2018", application of herbicides within 75' of any waterbody is prohibited. In all intermittent or perennial streams within the GOM DPS, herbicide application is prohibited within 100'. No herbicides shall be applied within Section 1 as a whole.

20. To minimize the potential for impacts to federally threatened small whorled pogonia, the permittee is prohibited from herbicide application within 100 feet of the 174-acre tract containing the occurrence of the plant at Greene, Maine. The No-Herbicide Zone is depicted in Figure 3-3, p. 69 of the BA.

21. Prior to the start of construction, the permittee shall conduct environmental training for all contractors, sub-contractors, and inspectors. Federal and state resource and regulatory staff shall be invited to attend and/or assist in the presentations. At a minimum, this training shall include actions to be taken to avoid and minimize direct and indirect impacts to aquatic resources such as wetlands, streams, Atlantic salmon streams, and vernal pools; small whorled pogonia habitat; and actions to be taken relative to interactions with Canada lynx.

22. Construction equipment that needs to access the transmission line during operations for repair or maintenance activities will follow the same procedures regarding stream crossings as employed during construction. No instream work is allowed in any intermittent or perennial stream within the GOM DPS. Temporary stream crossings may only use crane mats or bridges that completely span the waterway.

23. ATV usage for operations and maintenance activities by CMP will be limited to the maximum extent practicable and potential ground or resource disturbance will be minimized by utilizing existing upland access ways and snowmobile trail bridges. To avoid or minimize effects to Atlantic salmon and its listed Critical Habitat from ATV usage for operations and maintenance activities, CMP will adopt the following procedures:

a. No fording of streams within the Sheepscot River and Sandy River watersheds or within 1,000 feet upstream of these watersheds will occur unless under frozen conditions. Within these watersheds, ATVs may only cross unfrozen streams using mats or bridges that completely span the waterway.

b. Within mapped Critical Habitat but outside the Sheepscot River and Sandy River watersheds, fording of unfrozen streams may only occur under the following conditions:

(1) To the maximum extent practicable, the crossing is dry, shallow, or exhibits low flows (note - low flows typically occur from July 15 to September 30 of any year). To the maximum extent practicable, the substrate at the crossing consists exclusively of coarse-grained gravel, cobbles, rocks or ledge.

(2) Destruction of riparian vegetation is avoided to the maximum extent practicable.

(3) The stream is crossed at the narrowest practicable location.

(4) The crossing frequency is limited to one to two transits per maintenance cycle, or to the minimum number required.

(5) Erosion and sedimentation controls will be installed in areas of soil disturbance and any disturbed banks are promptly stabilized and revegetated as necessary.

c. Within the GOM DPS but outside mapped Critical Habitat, CMP operations and maintenance personnel shall still make every effort to cross streams under frozen conditions, to avoid the crossing, or to utilize mats or bridges (temporary or permanent) that span the waterway. For crossings that cannot be avoided during unfrozen conditions, CMP will still generally apply the best management practices listed above, but they are no longer prescriptive unless the crossing is within 1,000 feet upstream of mapped Critical Habitat.

d. CMP shall take all available and practicable measures to discourage impacts to sensitive resources from public ATV and snowmobile use during and after construction of the project including:

(1) Communication and coordination with landowners, ATV and snowmobile clubs, sporting camps, and others that maintain recreational trails on or near the NECEC ROW, especially forest landowners in segments 1, 2, and 3.

(2) Communication with local organized clubs through the State of Maine Department of Agriculture, Conservation and Forestry's Bureau of Parks and Lands, Off-Road Recreational Vehicle Office.

(3) Use of signage and deterrents (e.g., boulders, gates, etc.) in areas of ATV activity with noted associated environmental impacts. At a minimum, the permittee shall install advisory signage on all identified trail crossings of perennial and intermittent streams within the ROW in the Sheepscot River and Sandy River watersheds or within 1,000 feet upstream of these watersheds.

(4) Reporting of unauthorized ATV and snowmobile travel to law enforcement (e.g. Maine Warden Service) as needed to halt excessive disturbance of recently restored and stabilized areas or in instances where environmental impact associated with public use persists following the implementation of deterrents. Excessive disturbance and damage to streams and riparian areas within the GOM DPS must be reported to the USFWS Maine Field Office.

24. For any inadvertent release of drilling mud during the directional drill beneath the Kennebec River, the permittee shall comply with "Requirements for Inadvertent Fluid Release Prevention, Monitoring, and Contingency Plan for HDD Operations" (Exhibit F of the BA). If an inadvertent release occurs, the USACE and the MDEP will be notified, as specified in Exhibit F of the BA. The USFWS Maine Field Office will also be notified (Wende Mahaney at 207-902-1569 or wende_mahaney@fws.gov)

25. To minimize the project's potential impact to the federally threatened Canada lynx and its Critical Habitat between Starks to Beattie Township, the permittee shall implement the following measures:

a. CMP and CMP contractor/subcontractor vehicle traffic speeds on unimproved access roads during construction shall be kept less than 30 mph (road design speed) to minimize chance of collisions with lynx and other wildlife.

b. To the maximum extent practicable, the permittee shall gate access roads under CMP's direct control to vehicle traffic (not foot traffic) with approval from the landowner during the fall trapping and hunting seasons to further reduce the likelihood of incidental take of lynx.

c. Any Canada lynx road collisions or mortalities will be reported to the U.S. Fish & Wildlife Service's Ecological Services Maine Field Office and the USACE, Maine Project Office within 48 hours. Points of contact are Mark McCollough at mark_mccollough@fws.gov; 207-902-1570 and Jay Clement at jay.l.clement@usace.army.mil; 207-623-8367. Carcasses shall be collected, tagged with location and date found and by whom (with contact information), and frozen immediately and transferred to the Service. The Corps will immediately reinstate consultation with the Service if there is any take of Canada lynx.

d. Should Canada lynx be observed during construction within the right-of-way during the denning season from May 1 to July 15, contractors and subcontractors will immediately suspend all activity in the vicinity of the occurrence, immediately leave the area unless it poses a safety concern, and notify project supervisors and environmental inspector(s). Environmental inspector(s) will consult with state wildlife officials, as well as the DOE, USFWS, and the USACE prior to proceeding with construction. The environmental training provided to all project personnel will include a discussion of these measures and any other specific protocols determined necessary for the protection of Canada lynx.

e. In the absence of active human activity, for any period of time where drilled or excavated holes for pole installation will remain open pending the sequential installation of the pole(s), the holes shall be completely covered by any means to minimize the risk of entrapment to lynx and other wildlife.

f. To avoid entrapment of lynx in fenced areas (e.g., substations in Segments 1, 2, and northern part of 3), fencing mesh size will be less than 2 inches by 2 inches (i.e. standard chain link fencing). Lynx escaping devices consisting of two leaning poles (trees with bark or rough surface greater than 5 inches in diameter) will be placed at a shallow angle (less than 35 degrees) in each corner of the fenced area. Any lynx found alive in fenced areas will be released immediately and reported to the Service within 48 hours. Any lynx found dead will be reported within 48 hours to the U.S. Fish & Wildlife Service's Ecological Services Maine Field Office and the Corps of Engineers, Maine Project Office within 48 hours. Points of contact are Mark McCollough at mark_mccollough@fws.gov; 207-902-1570 and Jay Clement at jay.l.clement@usace.army.mil; 207-623-8367.

g. To the maximum extent practicable, cleared areas beneath the transmission line shall be allowed/encouraged to develop a dense growth of low ground cover, shrub, and conifer tree species.

h. Routine vegetation management of the transmission line corridor shall be in accordance with the applicant's post-construction vegetation management plan in Exhibit D, updated June 25, 2020.

26. Future commitments by CMP (Maine DEP order, p. 81) to mitigate wildlife and fisheries impacts of the NECEC include a Conservation Plan and management plans for 40,000 acres to be conserved by conservation easement or fee title acquisition in the vicinity of Segment 1. To ensure that these plans do not adversely affect or take federally listed species and to promote the conservation of Canada lynx, northern long-eared bats, and other federally listed species, the permittee shall furnish the USFWS with copies of all submittals required by the Maine DEP to solicit Service review and comment and participation in future interagency discussions.

27. To assess impact to the small whorled pogonia, the permittee shall monitor small whorled pogonia within the property owned by CMP adjacent to the 174-acre tract in Greene each year during construction, for the three consecutive years following completion of the NECEC, and every third year thereafter until such time that the Service and Maine Natural Areas Program deem monitoring no longer necessary.

28. The permittee shall permanently record all natural resource buffers, including those related to Atlantic salmon and small whorled pogonia, upon completion of construction (e.g. GPS coordinates) and shall further highlight them with flagging prior to any future maintenance activities.

EXHIBIT 3 PROOF OF TITLE, RIGHT, OR INTEREST

New England Clean Energy Connect**Real Property Rights in the Town of Durham**

CMP Parcel #	Municipality	County	Grantor	Grantee	Date	Book/Page	Type
55	Durham	Androscoggin	Hattie D Stackpole	CECSC	08/31/1929	395/543	Fee
57	Durham	Androscoggin	Clyde L Hall	CECSC	06/14/1930	386/499	Fee
58	Durham	Androscoggin	Richard H Norris	CECSC	09/05/1929	395/540	Fee
59	Durham	Androscoggin	Harold L Redding	CECSC	09/06/1929	395/493	Fee
60	Durham	Androscoggin	Georgie B Clark	CECSC	11/19/1929	395/539	Fee
61	Durham	Androscoggin	Edward L Perkins; Lizzie D	CECSC	09/10/1929	395/538	Fee
62	Durham	Androscoggin	Newton S Stowell	CECSC	09/10/1929	395/574	Fee
63	Durham	Androscoggin	Willard D Bowie	CECSC	09/12/1929	395/242	Fee
64	Durham	Androscoggin	Oswald A Wilson	CECSC	09/20/1929	395/573	Fee
65	Durham	Androscoggin	Leon R Bowie	CECSC	09/20/1929	397/604	Fee
66	Durham	Androscoggin	Charles W Larabee	CECSC	09/20/1929	397/599	Fee
67	Durham	Androscoggin	Edward H Bowie	CECSC	09/20/1929	395/571	Fee
68	Durham	Androscoggin	Irene S Allen	CECSC	09/27/1929	395/570	Fee
69	Durham	Androscoggin	George E Nelson	CECSC	09/27/1929	395/568	Fee
70	Durham	Androscoggin	John E Burns	CECSC	09/27/1929	395/569	Fee
71	Durham	Androscoggin	Eugene Fredette	CECSC	09/27/1929	395/572	Fee
72	Durham	Androscoggin	Cyrus C Penley	CECSC	09/27/1929	395/567	Fee
73	Durham	Androscoggin	Lizzie D Perkins etal	CECSC	09/27/1929	397/598	Fee
74	Durham	Androscoggin	Mable G Sawyer	CECSC	10/16/1929	395/566	Fee
75	Durham	Androscoggin	Leon R Carleton	CECSC	10/01/1929	397/602	Fee

list by deed 66
9/20/29

Know all Men by these Presents,

That I CHARLES W. LARRABEE
 of Durham, in the county of Androscoggin, and State of Maine,
 in consideration of one dollar and other valuable
 consideration
 paid by the CENTRAL SECURITIES CORPORATION, of Augusta, in the
 county of Kennebec, and State of Maine,

the receipt whereof I do hereby acknowledge, do hereby
 give, grant, bargain, sell and convey unto the said

CENTRAL SECURITIES CORPORATION, its successors

and Assigns forever, a certain lot or parcel of land, ~~XXXXXX~~
~~XXXXXXXXXXXXXXXXXXXX~~ situated in . . . Durham in said County of
 Androscoggin , and bounded and described as follows:

Being a strip of land four hundred (400) feet in width, extending
 from my Northwesterly line at land of Leon R. Bowie at the High-
 way leading from Androscoggin River to New Gloucester, Southerly
 to my southwesterly line at land of Edward H. Bowie at the Swamp
 Road, so-called, bounded, NORTHWESTERLY by land of Leon R. Bowie
 at the Highway, NORTHEASTERLY by other land of Leon R. Bowie,
 EASTERLY by a line parallel with and sixty-two and one-half (62½)
 feet easterly of a certain survey line now staked out; SOUTHWEST-
 ERLY by land of Edward H. Bowie at the Highway, WESTERLY by a
 line parallel with and three hundred thirty-seven and one-half
 (337½) feet westerly of the above mentioned survey line.

RESERVING to the Grantor herein the wood and timber on the above
 described parcel, to be removed by the Grantor on written request
 of the Grantee, its successors or assigns; or, if not so removed
 in season to avoid interference with construction or maintenance
 work the Grantee reserves the right to remove said wood and timber.

ALSO, another lot or parcel of land, situated in said Durham,
 bounded and described as follows:- Being a strip of land four
 hundred (400) feet in width extending from my northwesterly line
 at land of Edward H. Bowie, southerly to my southwesterly line at
 land of S. Irene Allen; bounded, NORTHWESTERLY by land of Edward
 H. Bowie, EASTERLY by a line parallel with and sixty-two and one-
 half (62½) feet easterly of a certain survey line now staked out
 across said property and land of Edward H. Bowie, SOUTHWASTERLY
 by land of S. Irene Allen, WESTERLY by a line parallel with and
 three hundred thirty-seven and one-half (337½) feet westerly of
 the above mentioned survey line.

RESERVING to the Grantor herein an easement or right of way
 across the second above described parcel of land, not to exceed
 twenty (20) feet in width, to be used for agricultural and lumber-
 ing purposes only and in connection with the operation of the
 parcel of land lying westerly of the second lot of land herein
 conveyed, and to be located by the Grantee in some location

convenient for the said Grantor, which shall not however interfere with the use of said second above described parcel by the Grantee, its successors and assigns, or in connection with the transmission of electric energy.

ALSO RESERVING to the Grantor herein the wood and timber on the second above described parcel, to be removed by the Grantor on written request of the Grantee; its successors or assigns; or, if not so removed in season to avoid interference with construction or maintenance work the Grantee reserves the right to remove said wood and timber.

* * * *

The land herein conveyed is a portion of the premises conveyed to me by William R. Bowler by deed dated June 14, 1919, and recorded in Androscoggin Registry of Deeds, Book 289, Page 110.

Also reserving to the grantor herein, an easement or right of way across a portion of the first above described parcel, not exceeding twenty (20) feet in width, the same to be located along and near the northeasterly boundary of the same at land of Leon R. Bowler. Said right of way to be used by the grantor as a driveway leading to his dwelling and shall not be used however, so as to interfere with the use of said parcel by the grantor, its successors and assigns, or in connection with the transmission of electric energy.

To have and to hold the same, with all the privileges and appurtenances thereof to

the said

CENTRAL SECURITIES CORPORATION, its successors

~~Heirs~~ and Assigns to

their use and behoof forever.

And I do covenant with the said Grantee, its successors

~~Heirs~~ and assigns, that ~~as~~ I am lawfully seized in fee of the premises; that they are free of all incumbrances, - - - - -

that I have good right to sell and convey the same to the said Grantee, to hold as aforesaid; and that I, and my Heirs ^{successors} will Warrant and Defend the same to the said Grantee, its ~~Heirs~~ and Assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof I the said Grantor, ~~am~~ CHARLES W. LARRABEE
 and MARTHA K. LARRABEE
 wife of the said CHARLES W. LARRABEE
 in testimony of her relinquishment of all her right and title
 by descent, and all other rights in the above-described premises,
 have hereunto set our hands and seals, this twentieth
 day of September, in the year of our Lord one thousand nine
 hundred and twenty-nine.

SIGNED, SEALED AND DELIVERED
 IN PRESENCE OF

Leon R. Bowie
Leon R. Bowie

Charles W. Larrabee
Martha K. Larrabee

State of Maine, }
 Androscoggin, } ss.

September 20th 19 29

Personally appeared the above-named
 CHARLES W. LARRABEE and acknowledged the above
 instrument to be his free act and deed.

Before me,

A. R. Dumas
 Justice of the Peace

CPR 656

Warranty Deed

FROM

CHARLES W. LARRABEE

TO

CENTRAL SECURITIES CORPORATION

Dated September 20th 19 39

State of Maine

ANDREOSCOCGIN ss. Registry of Deeds

Received DEC 24 1929

at 1 h. — m. P. M., and

Recorded in Book 397, Page 579

Attest:

James O'Connell Register

FROM THE OFFICE OF
FRANK T. POWERS
ATTORNEY AT LAW

138 LIBBON ST.

CLEWISTON, MAINE
NOV 23 1929
MAINE NOTARY PUBLIC
FRANK T. POWERS

THIS AGREEMENT made this Twenty-first day of September 1929,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine, hereinafter called the "Corporation";

-and- Charles W Larrabee Town or City of Durham
State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning August 1, 1929 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Andrus, P.E.D. in the State of Maine last known place of business,

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written,

Signed, Sealed and Delivered
in presence of:

CENTRAL SECURITIES CORPORATION

By A. D. Douglas
Charles W. Larrabee
Licensee.

9/27/29

Know all Men by these Presents,

That I, CYRUS G. PENLEY, of Durham, Androscoggin County, Maine,

in consideration of one dollar and other valuable considerations,

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said CENTRAL SECURITIES CORPORATION, its successors

~~XXXXXX~~

and Assigns forever, a certain lot or parcel of land, ~~with the~~
~~XXXXXXXXXXXXXXXXXX~~ situated in Durham, in said County of
Androscoggin, Maine, ~~XXXXXX bounded and described as follows~~
southerly and westerly of the road leading from Auburn to North
Pownal and bounded and described as follows:

Northerly by land now or formerly of Eugene Fredette;
Easterly by a line parallel with and Sixty-two and one half (62½)
feet easterly of the survey line now staked out across my land and
across said Fredette lot; southerly by land now or formerly belonging
to the Heirs of Caroline G. Ellis. The above lot being triangular
in form and containing about four and one-quarter (4¼) acres.

The lot herein conveyed being a portion of the same
property conveyed to me by Deed from Greenfield A. Randall, dated
April 22, 1911, and recorded in Androscoggin County Registry of
Deeds, Book 239, Page 277.

*Reserving to the grantor herein, the wood
and timber on said parcel, the same to be removed
at the request of the grantee in season to avoid
interference with construction, or if not so removed
the grantee reserves the right to cut, or cut and
remove and dispose of the same at its option*

To have and to hold the same, with all the privileges and appurtenances thereof to
 the said **CENTRAL SECURITIES CORPORATION, its successors**

~~XXXX~~ and Assigns to
 its use and behoof forever.

And I do covenant with the said Grantee, its successors
~~XXXX~~ and assigns, that ~~XXX~~ I am lawfully seized in fee of the
 premises; that they are free of all incumbrances,

that I have good right to sell and convey the same to the
 said Grantee, to hold as aforesaid; and that I, and My Heirs
 will Warrant and Defend the same to the said Grantee, its successors
 and Assigns forever, against the lawful claims and demands of all
 persons.

In Witness Whereof I, the said Grantor, ~~and~~ Cyrus O. Penley,
and Augusta M. Penley, wife of the said Cyrus O. Penley

~~of the County~~

in testimony of her relinquishment of her right and title
by descent, and all other rights in the above-described premises,
have hereunto set our hands and seals, this twenty-seventh
day of September, in the year of our Lord one thousand nine
hundred and twenty-nine.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

A. N. Douglas
to both

Cyrus O. Penley
Augusta M. Penley



State of Maine, }
ANDROSCOGGIN } ss.

September 27th, 1929.

Personally appeared the above-named Cyrus O. Penley
and acknowledged the above
instrument to be his free act and deed.

Before me,

A. N. Douglas
Justice of the Peace

62 CPR

Warranty Deed

FROM

CYRUS G. PENLEY

TO

CENTRAL SECURITIES CORPORATION

Dated SEPTEMBER 27, 1929.

State of Maine

ANDROSCOGGIN

ss. Registry of Deeds

DEC 24 1929

Received _____ 19__

at _____ h., _____ m., P. M., and

Recorded in Book 395, Page 567.

Attest:

James Bellamy
Register.

FROM THE OFFICE OF
FRANK T. POWERS
 M. ATTORNEY AT LAW
 138 LIBBY ST. LEWISTON, MAINE
 REG. NO. 530
 TAX. NO. 17
 DEC 24 1929

COMPARED

THIS AGREEMENT made this twenty-seventh day of September 1929,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine, hereinafter called the "Corporation";

-and- Cyrus C. Parley Town or City of Durham
State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning January 1, 1930 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Andover Maine REDI in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

Signed, Sealed and Delivered
in presence of:

CENTRAL SECURITIES CORPORATION

By [Signature]
Cyrus C. Parley
Licensee.

Pinley, Cyrus C.

17

C. M. P. Co.
BOX NO. 56
ENVE. NO. 33-B
LOC. NO. 17

(No. 10)

Know all men by these Presents,

That EDWARD L. AND LIZZIE D. PERKINS, of Durham, Androscoggin County, Maine

in consideration of One Dollar and other valuable consideration

paid by the CENTRAL SECURITIES CORPORATION of Augusta, Kennebec County, Maine

the receipt whereof I do hereby acknowledge; do hereby give, grant, bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

its successors and Assigns forever,

A certain lot or parcel of land in the Town of Durham, bounded and described as follows:

A strip of land four hundred feet in width extending across the ~~south~~ westerly corner of my farm from its westerly to its southerly line and bounded northerly by land of Georgia B. Clark et al; easterly by a line parallel with and sixty-two and one-half (62½) feet easterly of the survey line now staked out; southerly by land of Newton S. Stowell; westerly by a line parallel with and three hundred thirty-seven and one-half (337½) feet westerly of the survey line above mentioned and by land of Georgia B. Clark, et al.

Being a portion of the land conveyed to us by deed from Samuel Lufkins, dated November 21, 1907 and recorded in Androscoggin Registry, Book 220, Page 276.

Reserving to the grantor herein, an easement or right of way across the above described parcel of land not to exceed twenty (20) feet in width and to be located by the grantee in some location convenient for the said grantor and which will not however, interfere with the use of the said above described parcel by said grantee, or in connection with the transmission of electric current.

Reserving also to the grantor herein the wood and lumber on said parcel, said wood and lumber to be removed by the grantor on written request of the grantee. Or, if not removed by the grantor in season to avoid interference with construction or maintenance work, the grantee may cut, or out, remove, and dispose of said wood and lumber at its option.

To have and to hold the aforegranted and bargained premises,
with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its successors

Heirs and Assigns, to its and their use and behoof
forever.

And I do covenant with the said Grantee, its Successors
and Assigns, that I am lawfully seized in fee of the premises;
that they are free of all incumbrances;

that I have good right to sell and convey the same to the said
Grantee to hold as aforesaid; and that I and my Heirs, shall
and will warrant and defend the same to the said Grantee, its successors
Heirs and Assigns forever, against the lawful claims and demands
of all persons.

In Witness Whereof, the said Edward L. Perkins

and Lizzie D. Perkins wife of the said Edward L. Perkins

joining in this deed as Grantor, and relinquishing and conveying her rights by descent and all other rights in the above described premises have hereunto set our hand and seal this tenth day of September in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

A. M. Douglas
to wit

Edward L. Perkins
Lizzie D. Perkins

State of Maine, }
Androscoggin } ss.

September 10, 1929

Personally appeared the above named

EDWARD L. PERKINS and Lizzie D. Perkins

and acknowledged the above instrument to be ^{their} ~~his~~ free act and deed.

Before me,

A. M. Douglas
Justice of the Peace.

CPR (57)

Warranty Deed. 6

FROM

EDWARD L. & LIZZIE D. PERKINS

TO

CENTRAL SECURITIES CORPORATION

DATED, SEPTEMBER 10 19 29

State of Maine.

ANDROSCOGGIN

ss: Registry of Deeds.

Received DEC 11 1929 19

at 7 H. 40 M. H. and recorded in Book 570 Page 538

ATTEST:

James Bellamy Registrar

FROM THE OFFICE OF

C.M. 50 23-B

SMITH & BAIN, FALLEN ST., 65 Exchange St., Portland, Me.

COMPARED

1/13/30

HERE ALL MEN BY THESE PRESENTS

That MICHIGAN SAVINGS BANK, a banking corporation duly organized and existing under the laws of the State of Maine and having a place of business at Auburn, in the County of Androscoggin and said bank, mortgagee under a certain mortgage made and entered into by and between Edward L. and Lizzie B. Jenkins and said Mechanics Savings Bank, said mortgage being dated June 12, 1921 and recorded in Androscoggin County Registry of Deeds, Book 500, page 50, for consideration paid, hereby releases to said Edward L. and Lizzie B. Jenkins all right, title and interest acquired under and by virtue of said mortgage in and to that portion of the mortgaged premises hereinafter described as follows:

So much of said mortgaged property as lies within a strip of land 500 feet in width bounded on the north by property formerly of George H. Clark and on the south by land now or formerly of Weston A. Stowell, on the east by a line parallel with and 62 1/2 feet westerly of the survey line as now laid out for the Portland-Lewiston-Trenton-London Line of Central Maine Paper Company, and on the west by a line parallel with and 62 1/2 feet westerly of said survey line.

This release shall in no way affect or impair the right of said Mechanics Savings Bank, mortgagee as aforesaid, to hold under said mortgage as security for the sum remaining due thereon, or to foreclose upon the terms of said mortgage all the remainder of the premises conveyed therein and not hereby released; and this release is given without warranty express or implied,

IN WITNESS WHEREOF, the said Mechanics Savings Bank has caused its corporate name to be signed and its corporate seal affixed by *J. G. Satchel, Jr.* its *Treasurer* thereunto duly authorized, this *9th* day of *May*, 1930.

Signed, sealed and delivered in the presence of
James F. Brown

MECHANICS SAVINGS BANK
by *J. G. Satchel, Jr.*



STATE OF MISSISSIPPI

Androsoggin, SS.

May 9, 1930.

Personally appeared the above named *J. G. Satchel* and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Mechanics Savings Bank.

Before me,

James F. Brown

Justice of the Peace.

Release of Mortgage 6

Mechanics Savings Bank

to

Edward L. & Lizzie B. Perkins

Androsoggin, as. REGISTRY OF DEEDS
 Received MAY 17 1930
 at 1211 60th St. M and Recorded in
 Book 422 Page 423
 Attest *Lizzie B. Perkins*
 Register.

O. M. P. Co.
 BOX NO. 50
 DRIVE NO. 32-13
 DOC. NO. 6

THIS AGREEMENT made this nineteenth day of November 1929,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County,
Maine, hereinafter called the "Corporation";

-and- Edward L. Perkins ~~Town or City~~ of Suburn

State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning January 1, 1930 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Suburn R. F. D. 1 in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

Signed, Sealed and Delivered
in presence of:

CENTRAL SECURITIES CORPORATION

By Edward L. Perkins
Edward L. Perkins
Licensee.

Perkins, Edward L. 6

C. M. P. Co.	
BOX NO.	50
TRAY NO.	33-B
DOC. NO.	6

[Faint, mostly illegible text, likely a letter or document content.]

Sept. 6/27
Dec. 6/27
9/20/29

Know all Men by these Presents,

That I EDWARD H. BOWIE

of Durham, in the county of Androscoggin, and State of Maine,

in consideration of one dollar and other valuable consideration

paid by CENTRAL SECURITIES CORPORATION

of Augusta, in the county of Kennebec, and State of Maine,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said

CENTRAL SECURITIES CORPORATION, its successors

~~HEREIN~~

and Assigns forever, a certain lot or parcel of land, ~~with~~

~~rights~~ situated in . . . Durham . . . in said County of

. . . Androscoggin . . . , and bounded and described as follows:

Being a strip of land four hundred (400) feet in width and extending from my Northeasterly line at land of Charles W. Larrabee at the Swamp Road, so called, southerly to my southeasterly line at other land of Charles W. Larrabee. Bounded, NORTHERLY by land of Charles W. Larrabee at the Swamp Road, so-called; EASTERLY by a line parallel with and sixty-two and one-half (62½) feet Easterly of a survey line now staked out; SOUTHERLY by other land of Charles W. Larrabee; WESTERLY by a line parallel with and three hundred thirty-seven and one-half (337½) feet Westerly of the above mentioned survey line. Containing about seventeen and seventy-three one-hundredths (17.73) acres. Being a portion of the same premises conveyed to me by deed from my father, Edward T. Bowie, dated January 28, 1899, and recorded in the Androscoggin County Registry of Deeds, Book 179, Page 592.

RESERVING to the Grantor herein the wood and timber on

the above described parcel, to be removed by the Grantor on written request of the Grantee, its successors or assigns; or, if not so removed in season to avoid interference with construction or maintenance work, the Grantee reserves the right to remove said wood and timber.

Reserving to the grantor herein, an easement or right of way not exceeding twenty (20) feet in width across said strip of land, to be used for agricultural and lumbering purposes, only, in connection with the operation of that portion of my farm lying easterly of said strip, and to be located by the grantee in some location convenient for the grantor, but which shall not, however be used so as to interfere with the use of said strip by the grantee, its successors and assigns, or in connection with the transmission of electric energy.

To have and to hold the same, with all the privileges and appurtenances thereof to

the said

CENTRAL SECURITIES CORPORATION, its successors

~~Heirs~~ and Assigns to

their use and behoof forever.

And I do covenant with the said Grantee, **its successors** ~~Heirs~~ and assigns, that ~~we~~ I am lawfully seized in fee of the premises; that they are free of all incumbrances, - - - - -

that I have good right to sell and convey the same to the said Grantee, to hold as aforesaid; and that I, and my Heirs will Warrant and Defend the same to the said Grantee, **its successors** ~~Heirs~~ and Assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof I, the said Grantor, ~~xxx~~ EDWARD H. BOWIE
and ESTELLA BOWIE

wife of the said Edward H. Bowie
in testimony of her relinquishment of all her right and title
by descent, and all other rights in the above-described premises,
have hereunto set our hands and seals, this twentieth
day of September, in the year of our Lord one thousand nine
hundred and twenty-nine

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

A. N. Douglas
to both

Edward H. Bowie
Estella M. Bowie



State of Maine, }
Androscoggin, } ss.

September 20th 19 29

Personally appeared the above-named

EDWARD H. BOWIE

and acknowledged the above

instrument to be his free act and deed.

Before me,

A. N. Douglas
Justice of the Peace

CPR (57)

Warranty Deed

FROM

EDWARD H. BOWIE

TO

CENTRAL SECURITIES CORPORATION

Dated September 20th 19 29.

State of Maine
ANDROSCOGGIN

ss. Registry of Deeds

Received DEC 24 1929

at 1 h. — m. P. M., and

Recorded in Book 395, Page 571.

Attest:

Francis P. Powers Registrar

FROM THE OFFICE OF
FRANK T. POWERS
ATTORNEY AT LAW
138 Union St. LEWISTON, MAINE
R. 1001 State of Maine Seal Blank, Concord, Maine

NO. 50
NO. 33-0
NO. 12

COPIES

THIS AGREEMENT made this twenty-first day of October 1929,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine, hereinafter called the "Corporation";

-and- Edward H. Bowie Town or City of Durham

State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning January 1, 1930 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Durham P. E. D. 2 in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

Signed, Sealed and Delivered in presence of:

CENTRAL SECURITIES CORPORATION

By A. N. Douglas
Edward H. Bowie
Licensee.



Bowrie, Edward H. 17

C. M. P. Co
REF. NO. 56
SER. NO. 33-B
JUN 12

Set by
Rev. 67

CENTRAL MAINE POWER COMPANY

LEASE OF: 400 foot right of way strip
LOCATED IN: Durham, Maine

MEMORANDUM OF AGREEMENT

Made the 17th day of September in the
year nineteen hundred and forty-seven, in duplicate, between the
CENTRAL MAINE POWER COMPANY, a Maine corporation duly established
by law, hereinafter called the "Lessor", and

FRANK SMART of Auburn, Maine hereinafter called
the "Lessee".

WITNESSETH:

That the Lessor hereby grants permission unto the Lessee
to enter upon and occupy in the manner and subject to the conditions
and restrictions hereinafter stated, the following described premises:

DESCRIPTION

Northerly by the Swamp Road, so-called; easterly by a line
parallel with and $62\frac{1}{2}$ feet easterly of the center line of the
first double electric transmission pole line established
across this lot; southerly by land now or formerly owned
by Charles W. Larrabee; westerly by a line parallel with and
 $337\frac{1}{2}$ feet westerly of the center line of the above described
pole line.

Said premises being a portion of the so-called Edward H. Bowie
farm, Durham, Maine

RENTAL

The said Lessee covenants and agrees to pay to the Lessor
as rent the sum of One Dollars (\$ 1.00)
per year, payable in advance each year on the 17th day
of September; the first payment being due on the 17th
day of September, 1947.

TERM

To hold and enjoy the aforesaid premises and rights for the
term of one year and thereafter until cancelled by either party
on 150 days written notice given at any time whether on
rent day or not.

RESERVATIONS

The rights herein granted to the Lessee by the Lessor shall in no way interfere with the use of said parcel of land by the Lessor, its successors or assigns, in connection with the construction, operation and maintenance of electric transmission lines along and/or across said parcel of land.

TAXES

All taxes on the land to be paid by the Lessor.

GENERAL

The Lessee hereby covenants and agrees:

- (a) To pay the rent as above stipulated on the dates specified above.
- (b) Not to assign or sub-let said premises without the permission of the Lessor in writing.
- (c) Not to allow any strip or waste and not to erect or maintain any structures on said premises.
- (d) Not to carry on any illegal or offensive trade on said premises.
- (e) To quit the premises at the termination of this lease and to leave the same in good condition, casualty excepted.
- (f) In the use and occupancy of said premises, to conform at all times to all National, State, County and Municipal laws, ordinances, rules and regulations.
- (g) To use said premises for agricultural purposes only, which are to be conducted in a fair, husbandmanlike and proper manner and to maintain all fencing in a legal manner and at his cost and expense.
- (h) To indemnify, protect and save harmless the Lessor from and against all claims, suits, costs, charges and damages made upon or incurred by the Lessor in connection with this lease.

IN WITNESS WHEREOF, the parties have herunto interchangeably set their hands and seals the day and year first above written.

SIGNED, SEALED and DELIVERED
in presence of

G. J. Crawford
Henry A. Matus

CENTRAL MAINE POWER COMPANY

By: [Signature]
Agent.

[Signature]
Lessor.

(No. 106)

Sheet 64
Book 71**Know all men by these Presents,**

That I, EUGENE FREDETTE, of Durham, Androscoggin County, Maine,

in consideration of one Dollar and other valuable consideration,

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said CENTRAL SECURITIES CORPORATION, ITS SUCCESSORS,

~~HERE~~ and Assigns forever,

A certain lot or parcel of land, in said Durham, County and State aforesaid, on the southerly side of the highway leading from Auburn to North Pownal and described as follows:

Northerly by said highway leading from Auburn to North Pownal at land now or formerly of S. Irene Allen and land now or formerly of George E. Nelson; Easterly by land now or formerly of Cyrus C. Penley; Southerly by land now or formerly of Myron L. Fickett; Westerly by a line parallel with and three hundred thirty-seven (337) and one half feet Westerly of the survey line now staked out across my land and the said Penley lot and the said Allen lot and the said Nelson lot. Containing about eight and six-tenths ($8 \frac{6}{10}$) acres.

The land herein conveyed being a portion of the same property conveyed to me by two Deeds; one from L.R. Carleton to me and Joseph Demers; dated May 15, 1922, and recorded in the Androscoggin County Registry of Deeds, Book 318, Page 29; the other from Joseph Demers to me, dated May 12th, 1923, and recorded in said Registry, Book 335, Page 121.

Excepting and reserving from the above conveyance so much of the Burns property as is located within the bounds of the above mentioned property.

Reserving to the Grantor herein the wood and lumber on said parcel, said wood and lumber to be removed by the Grantor on written request of the Grantee. Or, if not removed by the Grantor in season to avoid interference with construction or maintenance work, the Grantee may cut, or cut, remove and dispose of said wood and lumber at its option.

To have and to hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof to the said CENTRAL SECURITIES CORPORATION, its successors

~~and~~ and Assigns, to its ~~and~~ and their use and behoof forever.

And I do covenant with the said Grantee, its successors and Assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and My Heirs, shall and will Warrant and Defend the same to the said Grantee, its successors ~~and~~ and Assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said EUGENE FREDETTE

and CECILE FREDETTE, wife of the said EUGENE FREDETTE

joining in this deed as Grantor, and relinquishing and conveying her rights by descent and all other rights in the above described premises have hereunto set our hand and seals this twenty-seventh day of September, in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

A. Douglas

Cecile Fredette
her mark

Frank T. Prina

Eugene Fredette



State of Maine, } ss.
ANDROSCOGGIN

September 27th, 1929.

Personally appeared the above named EUGENE FREDETTE and acknowledged the above instrument to be his free act and deed.

Before me, *Frank T. Prina*
Justice of the Peace.

59
CPR

Warranty Deed. 14

FROM

EUGENE FREDETTE

TO

CENTRAL SECURITIES CORPORATION

DATED, SEPTEMBER 27th, 1929

State of Maine.
ANDROSCOGGIN

ss: Registry of Deeds,

Received DEC 24 1929 -19-

at 11:00 A.M., and
recorded in Book 395, Page 572

ATTEST:

James G. Bell
REGISTER.

FROM THE OFFICE OF
FRANK T. POWERS
NOT. NO. 33-B
14

SMITH & SALK, Portland, 45 Exchange Street, Portland, Maine

COMPARE

T. CYRIL BUTLER
COUNSELLOR-AT-LAW
1060 BROAD STREET
NEWARK, N. J.
TELEPHONE MULBERRY 1070

Nov. 29, 1929.

Mr. A. N. Douglas,
Central Securities Corp.,
Augusta, Maine.

Dear Sir:

My client, Mr. Demars has informed me that he has withdrawn his demand for interest relative to the Fredette matter, and you are therefore at liberty to deliver the quit-claim deed heretofore handed you.

Very truly yours,

T. Cyril Butler

T. CYRIL BUTLER.

TCB:VL

59A

14

C.M.P. No. 50
BOX NO. 32-B
SERV. NO. 14

SMITH & BARK, Publishers of Knights' Reports, Portland, Maine

COMPARISON

THIS AGREEMENT made this twentieth-fourth day of October 1927,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine, hereinafter called the "Corporation";

-and- Ernest Fardette Town or City of Durham State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning January 1, 1930 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Auburn, R.F.D. 2 in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written,

Signed, Sealed and Delivered in presence of:

CENTRAL SECURITIES CORPORATION

By A. W. Douglas
Ernest Fardette
Licensee.



14

Fredetta Engle

C. M. P. Co.
BOX NO. 5a
ENVE. NO. 23-R
ENC. NO. 14

COMPARED

sect. 64

(No. 122)

Know all men by these Presents,**That I, Joseph Demers of Newark, in the State of New Jersey,**

in consideration of one dollar and other valuable consideration,

paid by Eugene Fredette of Durham, in the County of Androscoggin,
and State of Maine,the receipt whereof I do hereby acknowledge, do hereby remise,
release, bargain, sell and convey, and forever quit-claim unto the said
Eugene Fredette,Heirs and Assigns forever, all my right, title and interest
in and to a certain lot or parcel of land, in said Durham, County
of Androscoggin, and State of Maine, on the Southerly side of the
highway, leading from Auburn to North Pownal and described as
follows:-

Northerly by said highway leading from Auburn to North
Pownal at land now or formerly of S. Irene Allen and land now or
formerly of George E. Nelson; Easterly by land now or formerly
of Cyrus G. Penley; Southerly by land now or formerly of Myron
L. Fickett; Westerly by a line parallel with and three hundred
thirty-seven and one-half (337½) feet Westerly of the survey line
now staked out across my land and the said Penley lot and the said
Allen lot and the said Nelson Lot. Containing about eight and
six-tenths (8 6/10) acres.

Meaning and intending hereby to release all rights,
title and interest that I hold by virtue of a Mortgage on the above
described premises only. Mortgage dated May 12th, 1923, and
recorded in the Androscoggin County Registry of Deeds, Book 341,
Page 2.

It being the intention of this release, to release from the lien
of the said mortgage eight and six-tenths acres, and only eight and six-tenths
acres of all the land and premises as described in the above referred to mortgage.

To have and to hold the same, together with all the privileges and appurtenances thereto belonging to him,
the said Eugene Fredotto,

his Heirs and Assigns forever.

In Witness Whereof, I, the said Joseph Demers

and Alice Demers

wife of the said Joseph Demers

joining in this deed as Grantor, and relinquishing and conveying her rights by descent and all our other rights in the above described premises have hereunto set our hands and seals this twenty-seventh day of September, in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

[Signature]

Joseph Demers

Alice Demers

New Jersey
State of ~~New Jersey~~
County of ~~Atlantic~~
ANDROSCOTT
ss.

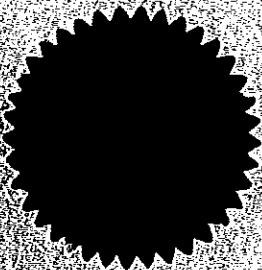
October 8, 1929
SEPTEMBER 27th, 1929

Personally appeared the above named Joseph Demers and Alice Demers his wife, and acknowledged the above instrument to be his free act and deed.

Before me,
[Signature] Justice of the Peace.
a Notary in Chancery
of New Jersey

C O 221

STATE OF NEW JERSEY
COUNTY OF ESSEX



I, JOHN H. SCOTT, Clerk of the County of Essex (and also Clerk of the Circuit Court and Court of Common Pleas, the same being Courts of Record of the aforesaid County, having by law a seal)

DO HEREBY CERTIFY, that Virginia Butler Esquire, whose name is subscribed to the attached certificate of acknowledgment, proof or affidavit, was at the time of taking said acknowledgment, proof or affidavit, a Master in Chancery, duly commissioned and sworn and residing in said State, and was in such Master in Chancery, an officer of said State duly authorized by the laws thereof to take and certify the same, as well as to take and certify the proof and acknowledgment of deeds for the conveyance of land, tenements or hereditaments, and other instruments in writing to be recorded in said State, and that the said acknowledgment is duly executed and taken according to the laws of said State, and that full faith and credit are and ought to be given to his official acts; and I further certify that I am well acquainted with his handwriting and verily believe the signature to the attached certificate is his genuine signature.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, this

10 day of October, A. D. 1926

John H. Scott Clerk

14

57A

1A

Quit-Claim Deed.

WITHOUT COVENANT. (Release)

FROM

Joseph Demers

TO

Eugene Fredette

DATE, September 27th, 1929.

ANDROSCOGGIN

ss: Registry of Deeds.

Received

DEC 24 1929

10

at _____ M., _____ M., and _____ M., and

recorded in Book 397, Page 596.

ATTEST:

James Belland
Deputy

FROM THE OFFICE OF
OFF. FOR NO. 50
EXCH. NO. 33-B
14

SMITH & SAWYER, Inc., 25 Exchange St., Portland, Me.

COMPARED

(No. 101)

Det. 69
Book 69

Know all men by these Presents,

9/27/29

That I, GEORGE E. NELSON, of Durham, Androscoggin County, Maine

in consideration of One Dollar and other valuable consideration

paid by the CENTRAL SECURITIES CORPORATION, of Augusta,
Kennebec County, Maine

the receipt whereof I do hereby acknowledge, do hereby give, grant,
bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

Its Successors ~~Heirs~~ and Assigns forever,

A certain lot or parcel of land in the Town of Durham, Androscoggin
County, Maine, on the easterly side of the highway leading from
Auburn to North Fernal, bounded and described as follows:

Northerly by land now or formerly of S. Irene Allen; easterly
by land now or formerly of S. Irene Allen; southerly by a right of
way owned by said S. Irene Allen; westerly by the highway leading
from Auburn to North Fernal at land of Eugene Fredette. Containing
about two (2) acres.

For a more particular description of the lot herein conveyed,
reference is hereby made to a deed from Roland Bowie to me dated
June 2, 1915 and recorded in Androscoggin Registry, Book 259,
Page 567.

To have and to hold the aforegranted and bargained premises,
with all the privileges and appurtenances thereof to the said
CENTRAL SECURITIES CORPORATION, its Successors

~~Heirs~~ and Assigns, to its ~~Heirs~~ and their use and behoof
forever.

And I do covenant with the said Grantee, its Successors
and Assigns, that I am lawfully seized in fee of the premises;
that they are free of all incumbrances;

that I have good right to sell and convey the same to the said
Grantee to hold as aforesaid; and that I and my Heirs, shall
and will Warrant and Defend the same to the said Grantee, its Successors

~~Heirs~~ and Assigns forever, against the lawful claims and demands
of all persons.

In Witness Whereof, the said GEORGE E. NELSON, single

~~and~~

~~with~~

joining in this deed as Grantor and relinquishing and conveying
rights by descent and all other right in the above
described premises have hereunto set my hand and seal this
Twenty-seventh day of September in the year of our Lord
one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered
in presence of

A. N. Douglas

George E. Nelson

State of Maine,

Androscoggin

} ss.

September 27 19 29

Personally appeared the above named

GEORGE E. NELSON

and acknowledged the above instrument to be his free act and
deed.

Before me,

A. N. Douglas

Justice of the Peace.

(6-D)
CPR
Surplus
Warranty Deed.

FROM

GEORGE E. NELSON

TO

CENTRAL SECURITIES CORPORATION

DATED, SEPTEMBER 27 19 29

State of Maine.

ANDROSCOGGIN ss: Registry of Deeds.

Received DEC 24 1929

At 1 H., M., P. M., and

recorded in Book 395, Page 568

ATTEST:

James O. Williams
REGISTRAR

FROM THE OFFICE OF J. P. R.

EX. NO. 50

FILE NO. 33-B

SMITH & HALE, Publishers, 45 Exchange St., Portland, Me.

COMPARED

[No. 124]

2016 4
11.2.60
11/2/60

Know all men by these Presents,

That I, GEORGIE B. CLARK, of Auburn, Androscoggin County, Maine

in consideration of One Dollar and other valuable consideration

paid by the CENTRAL SECURITIES CORPORATION of Augusta, Kennebec County, Maine

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

Its Successors ~~Heirs~~ and Assigns forever,

A triangular lot of land on the southerly side of the Libby Hill Road in the Town of Durham, Androscoggin County, Maine, bounded as follows:

Northerly by said Libby Hill Road at land now or formerly of Harold L. Redding; southeasterly by land now or formerly of Edward L. Perkins and land of the Central Securities Corporation; westerly by a line parallel with and three hundred thirty-seven and one-half (337½) feet westerly of the survey line now staked out across the lot herein conveyed and across the land of the Central Securities Corporation. Containing about six (6) acres.

Title to the above described property being derived by will of Maria H. Lambert of Auburn, recorded in Androscoggin Registry, Book 228, Page 414.

To have and to hold the aforegranted and bargained premises,
 with all the privileges and appurtenances thereof to the said
 CENTRAL SECURITIES CORPORATION, its Successors

Heirs and Assigns, to its and their use and behoof
 forever.

And I do covenant with the said Grantee, its Successors
 and Assigns, that I am lawfully seized in fee of the premises;
 that they are free of all incumbrances;

that I have good right to sell and convey the same to the said
 Grantee to hold as aforesaid; and that I and my Heirs, shall
 and will Warrant and Defend the same to the said Grantee, its Successors

Heirs and Assigns forever, against the lawful claims and demands
 of all persons.

In Witness Whereof, the said GEORGIE B. CLARK

and GEORGE H. CLARK ^{husband} ~~WIFE~~ of the said GEORGIE B. CLARK

joining in this deed as Grantor, and relinquishing and conveying his rights by descent and all other rights in the above described premises have hereunto set our hand and seals this ~~nineteenth~~ day of November in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, sealed and Delivered in presence of

A. N. Douglas
A. N. Douglas
A. N. Douglas

Georgie B. Clark
Georgia B. Clark
George H. Clark

State of Maine, }
Androscoggin } ss.

November 19 19 29

Personally appeared the above named

GEORGIE B. CLARK

and acknowledged the above instrument to be her free act and deed.

Before me,

A. N. Douglas

Justice of the Peace.

(50)

C P R

5

Warranty Deed.

FROM

GEORGIE B. CLARK

TO

CENTRAL SECURITIES CORPORATION

DATE, NOVEMBER 17 19 29

State of Maine
ANDROSCOGGIN

ss: Registry of Deeds.

Received DEC 11 1929

at 7 H. 40 M. A. M., and
recorded in Book 395, Page 539

Attest:

Thomas O. Bell
Registry

FROM THE OFFICE OF:

BOX 123-50
NO. 33-B
5

SMITH & BATA, Publishers, 48 Exchange St., Portland, Me.

COMPARED

ADMINISTRATOR'S OR GUARDIAN'S DEED.- PRIVATE SALE

Know all Men by these Presents,

That I, GEORGE H. CLARK, of Auburn, Androscoggin County, Maine, Guardian of Sturgis L. Clark, Bestrice E. Clark and Arthur D. Clark, minor children of George H. Clark and Georgie B. Clark, having on the 12th day of November A. D. 19 29 obtained License from the Honorable Benjamin L. Barman, Judge of Probate, within and for the County of Androscoggin and State of Maine, to sell and convey at private sale the Real Estate herein after described, of the said minor children above named for the sum of - - - - - Three Hundred - - - - - dollars, the same being an advantageous offer therefor, and having agreeably to the order and decree of said Court, given due notice upon the petition for license to make such sale, and having given the bond required by law, by virtue of the power and authority with which I am as aforesaid vested, and in consideration of the aforesaid sum of - - - - - Three Hundred - - - - - dollars, to me paid by Central Securities Corporation of Augusta, Kennebec County, Me. the receipt whereof I do hereby acknowledge, have given, granted and sold, and by these Presents do GIVE, GRANT, SELL and CONVEY to the said Central Securities Corporation, its Successors and Assigns forever, the following described Real Estate, viz:

A triangular lot of land on the southerly side of the Libby Hill Road in the Town of Durham, Androscoggin County, Maine, bounded as follows:

Northerly by said Libby Hill Road at land now or formerly of Harold L. Redding; southeasterly by land now or formerly of Edward L. Perkins and land of the Central Securities Corporation; westerly by a line parallel with and three hundred thirty-seven and one-half (337½) feet westerly of the survey line now staked out across the lot herein conveyed and across the land of the Central Securities Corporation. Containing about six (6) acres.

Title to the above described property being derived by will of Maria H. Lambert of Auburn, recorded in Androscoggin Registry, Book 228, Page 414.

To have and to hold the same, with all the privileges and appurtenances to the same belonging, in manner as aforesaid, to the said Central Securities Corporation, its Successors and Assigns forever.

And I the said George H. Clark, Guardian, do COVENANT to and with the said Central Securities Corporation, its Successors and Assigns, that I have in all things observed the rules and directions of law relative to the selling of said Estate, and have good right and lawful authority to sell and convey the same in manner aforesaid.

In Witness Whereof, I have hereunto set my hand and seal in my said capacity, this nineteenth day of November in the year of our Lord one thousand nine hundred and twenty-nine.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

A. N. Douglas

George H. Clark

State of Maine, Androscoggin ss. November 19, 1929. Person appeared the above named George H. Clark and acknowledged the above instrument to be his free act and deed in his said capacity.

Before me,

A. N. Douglas

Justice of the Peace.

50A

Guardian's Deed.

PRIVATE SALE.

FROM

GEORGE H. CLARK

TO

CENTRAL SECURITIES CORPORATION

DATED, NOVEMBER 19 1929.

ANDROSSOGGIN ss1 Registry of Deeds.

Received DEC 11 1929

at 7 P. M., 40 M., a M., and

recorded in Book 284 Page 485

ATTEST:

James Bellamy Register

FROM THE OFFICE OF

GEORGE D. LORING, Notary Public, N.C.

Stamp: 59, ENVI, REC. NO.

COMPARED

THIS AGREEMENT made this nineteenth day of November 1929,
BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County,
Maine, hereinafter called the "Corporation";

-and- Georgia B. Clark ~~Person~~ or City of Auburn
State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land
from the Licensee and the continued use of said strip of land by the
Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning January 1, 1930 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at ~~Person or City of~~ Auburn, R. F. D. 1 in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

Signed, Sealed and Delivered
in presence of:

CENTRAL SECURITIES CORPORATION

By A. N. Douglas
Georgia B. Clark
Licensee.

Clark, Georgia B. 5

C. M. P. Co.
BOX NO. 50
ENVE. NO. 32-B
P.O. NO. 5

Sept. 27
Dec. 1957

9/12/57

Know all Men by these Presents,

That I HAROLD L. REDDING
 of Auburn, in the county of Androscoggin, and State of Maine
 in consideration of one dollar
 paid by GENERAL SECURITIES CORPORATION, of Augusta, in the
 county of Kennebec, and State of Maine,

the receipt whereof I do hereby acknowledge, do hereby
 give, grant, bargain, sell and convey unto the said

GENERAL SECURITIES CORPORATION, its successors ~~HEIRS~~

and Assigns forever, a certain lot or parcel of land, ~~with the~~
~~markings shown on~~ situated in Durham in said County of
 Androscoggin , and bounded and described as follows:

Commencing on the Northeasterly side of the road at the
 owned by the within named Grantor and formerly
 Southwesterly corner of land owned by Mary Engelman, thence
 NORTHEASTERLY on the line of land of said Engelman one hundred
 (100) rods and twenty-two (22) links more or less to land con-
 veyed by Lewis O. Robinson to Cora A. Perkins; thence NORTH-
 WESTERLY by land of said Perkins to land formerly owned by A.
 A. Walker; thence SOUTHWESTERLY by Walker's line to the road
 aforesaid; thence SOUTHEASTERLY by said road to the bound
 begun at. Together with the right of way reserved by Lewis
 O. Robinson to cross and recross the land deeded to Cora A.
 Perkins with men and teams to the wood lot adjoining, which is
 the lot above described.

Being the fourth parcel or property described in a
 Warranty Deed to me from Flora Engelman, December 17, 1938,
 which deed is recorded in the Androscoggin County Registry
 of Deeds, Book 391, Page 8.

To have and to hold the same, with all the privileges and appurte-
 nances thereof to
 the said

CENTRAL SECURITIES CORPORATION, its successors

~~XXXXX~~ and Assigns to

their use and behoof forever.

And I do covenant with the said Grantee , Its successors
~~XXXXX~~ and assigns, that ~~XX~~ I am lawfully seized in fee of the
 premises; that they are free of all incumbrances, - - -

that I have good right to sell and convey the same to the
 said Grantee , to hold as aforesaid; and that I , and my Heirs
 will Warrant and Defend the same to the said Grantee , its ^{successors} ~~heirs~~
 and Assigns forever, against the lawful claims and demands of all
 persons.

In Witness Whereof I the said Grantor, and Emily Redding
 wife of the said Harold L. Redding
 in testimony of her relinquishment of all her right and title
 by descent, and all other rights in the above-described premises,
 have hereunto set our hand and seal, this sixth
 day of September, in the year of our Lord one thousand nine
 hundred and twenty-nine.

SIGNED, SEALED AND DELIVERED
 IN PRESENCE OF

A. N. Douglas
A. N. Douglas

Harold L. Redding
Emily Redding

State of Maine, }
 Androscoggin, } ss.

September 6th 1929

Personally appeared the above-named
 HAROLD L. REDDING and acknowledged the above
 instrument to be his free act and deed.

Before me,

A. N. Douglas
 Justice of the Peace

CPR (49)

SURPLIS
Warranty Deed 4

FROM

HAROLD L. REDDING

TO

CENTRAL SECURITIES CORPORATION

Dated September 6th 19 29

State of Maine

ANDROSCOGGIN ss. Registry of Deeds

Received NOV 23 1929

at 12 h., 10 m. P. M., and

Recorded in Book 393, Page 493

Attest:

Francis Belland Register

FROM THE OFFICE OF
FRANK T. POWERS
ATTORNEY AT LAW

138 LIBBON ST.

LEWISTON, MAINE

R. White, State of Maine Real Estate Commission, Maine

NOV 23 1929
S.M.V. No. 23
C. No. 4

COMPARED

(N.S. 196)

Oct 1967
Dec 1967

Know all men by these Presents,

9/10 Dec
12/15/67

That I, S. IRENE ALLEN, of Durham, Androscoggin County, Maine

in consideration of One Dollar and other valuable consideration

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said CENTRAL SECURITIES CORPORATION

Its successors, Heirs and Assigns forever,

A certain lot or parcel of land in the Town of Durham, Androscoggin County, Maine, bounded and described as follows:

A strip of land four hundred (400) feet in width extending from my northerly to my southerly line and bounded northerly by land now or formerly of Charles W. Larrabee; easterly by a line parallel with and sixty-two and one-half (62½) feet easterly of the survey line now staked out across my property; southerly by land now or formerly of George E. Holson and the highway leading from Auburn to North Fernal at land now or formerly of Eugene Fredette; westerly by a line parallel with and three hundred thirty-seven and one-half (337½) feet westerly of the survey line above mentioned. Containing about twenty-three and eight-tenths (23 8/10) acres.

The land herein conveyed being a portion of the same property conveyed to me by will from Reuben Hume, a copy of said will being recorded in Androscoggin Registry, Book 2-28, Page 432.

Reserving to the grantor herein, ~~two~~ easements or rights of way across the above described parcel of land, not to exceed twenty (20) feet in width and to be located by the grantee in some location convenient for the said grantor and which will not however, interfere with the use of the said above described parcel by said grantee or in connection with the transmission of electric energy.

Reserving also to the grantor herein the wood and lumber on said parcel, said wood and lumber to be removed by the grantor on written request of the grantee or, if not removed by the grantor in season to avoid interference with construction or maintenance work, the grantee may cut, or cut, remove and dispose of said wood and lumber at its option.

To have and to hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its successors

Heirs and Assigns, to its and their use and behoof forever.

And I do covenant with the said Grantee, its ^{Successors} ~~Heirs~~ and Assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my Heirs, shall and will Warrant and Defend the same to the said Grantee, its successors

Heirs and Assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said S. IRENE ALLEN

and Darford S. Allen ^{husband} ~~wife~~ of the said S. Irene Allen

joining in this deed as Grantor , and relinquishing and conveying his rights by descent and all other rights in the above described premises have hereunto set our hands and seals this *twenty-seventh* day of September in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

Frank T. Brown
To both

S. Irene Allen
Darford S. Allen

State of Maine, }
Androscoggin } ss.

September 27, 19 29

Personally appeared the above named S. IRENE ALLEN and acknowledged the above instrument to be her free act and deed.

Before me, *Frank T. Brown*
Justice of the Peace.

(64)

CPR 15 Warranty Deed.

FROM

S. IRENE ALLEN

TO

CENTRAL SECURITIES CORPORATION

DATE, SEPTEMBER 27 1929

State of Maine.
ANDROSCOGGIN ss: Registry of Deeds.

Received DEC 24 1929 10

at 1 P. M., and

recorded in Book 395, Page 570

ATTEST:

Jessie Allen
REGISTRAR

FROM THE OFFICE OF

BOX NO. 50
DRIVE NO. 33-B
15

BIRTH & SALE, Publishers, 100 State St., Portland, Me.

COPIES

July 30, 1941.

Mrs. S. Irene Allen
Highland Avenue
Auburn, Maine

Dear Mrs. Allen:

It is my understanding that you have sold your farm in Durham.

Under existing circumstances, it appears proper, and we hereby give you a termination notice as provided in item 4 of the agreement between you and the Central Securities Corporation dated October 1, 1939. This agreement, which you will recollect, covers use of a certain strip of land across the farm you formerly owned, which strip you sold to the Central Securities Corporation.

C b B

Very truly yours,

CENTRAL SECURITIES CORPORATION

BY W. B. Gotschell, Agent

C P R

PLANNING BOARD, DURHAM, N.C.
1000 WEST MAIN STREET
DURHAM, N.C. 27601

DOOR 1100

APPROVED FOR THE BOARD

APPROVED FOR THE BOARD
ON 11/15/75
BY THE PLANNING BOARD
DURHAM, N.C.

PLANNING BOARD

DURHAM PLANNING BOARD

DURHAM, N.C.

THIS AGREEMENT made this First day of October 1939,

BY AND BETWEEN:
CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County,
Maine, hereinafter called the "Corporation";

-and- S. Irene Allen Town or City of Durham
State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning January 1, 1930 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Durham in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

Signed, Sealed and Delivered
in presence of:

CENTRAL SECURITIES CORPORATION
By [Signature]
S. Irene Allen
Licensee.

15

Allen, S. Irons

C. M. P. Co.
BOX NO. 50
BAYE. NO. 33-B
DOC. NO. 15

sent to
Worcester

Know all Men by these Presents.

5/25/29

That the Durham Community Club of Durham, in the county of Androscoggin and State of Maine, by its trustees, Cyrus C. Penley, Gordon G. Larrabee and Adelbert G. Larrabee, through duly authorized in consideration of one dollar and other valuable consideration, to it

paid by the Central Securities Corporation of Augusta, Maine

the receipt whereof it do hereby acknowledge, do hereby remise, release, bargain, sell and convey, and forever quit-claim unto the said Central Securities Corporation, its successors heirs and assigns forever, all the right, title and interest held by the said Durham Community Club in and to a certain lot or parcel of land in said Durham, held by virtue of a deed from S. Irvin Allen dated October 8, 1921 and recorded in Androscoggin Registry, Book 315, Page 157.

To Have and to Hold the same, together with all the privileges and appurtenances therunto belonging, to the said

Central Securities Corporation, its successors

hold and assigns forever.

And it ~~do~~ **covenant** with the said Grantee, *its successors* hold and assigns, that *it* will **Warrant and Forever Defend** the premises to the said Grantee, *its successors* hold and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under *said Durham Community Street*

In Witness Whereof, the said Durham Community Club
 by its trustees, Cyrus C. Pease, Charles A. Larrabee
 and Adelbert G. Larrabee ^{and} their wife ^{and} their duly authorized
 wife of the said

joining in this deed as Grantor, and relinquishing and conveying
 right by descent and all other rights in the above described
 premises, have herunto set our hands and seals this *twenty-fifth*
 day of *September* in the year of our Lord one thousand nine
 hundred and *twenty-nine*

Signed, Sealed and Delivered
 in presence of

A. N. Duggins
 to each

Durham Community Club
Cyrus C. Pease & Charles A. Larrabee
Adelbert G. Larrabee

State of Maine

} ss.

September 25 1929

Personally appeared the above named *Cyrus C. Pease*
Charles A. Larrabee and *Adelbert G. Larrabee*

and acknowledged the above instru-
 ment to be their free act and deed, and the *free and legal* act of
 the said club.

Before me,

A. N. Duggins
 Justice of the Peace.

(60A)

CPR 15
Quit-Claim Deed.
(With Covenant)

From

Durham Community Club
To

Central Securities Corporation

dated September 20 1929.

State of Maine.
ANDROSCOGGIN ss. Registry of Deeds,
Received DEC 24 1929
at 1 a. m. P. M., and
recorded in Book 586, Page 371

Witness:
Jessie Belle
Register

FROM THE OFFICE OF

C. M. F. L.
1929-30 50
33-B

LOUIS BROOKS HARRON, Tax Assessor
Durham, ME.
1929

COMPANIES

315-157

S. Irene Allen

To

Warrant
 Oct 8
 1921

Richard Neys, C. C. Parley, Leon R. Coulton, Eldie Bessie and John Morrison of Durham or Personal Trustees of the Community Club.

By a stake on the edge of the private way leading from the main road to my dwelling house; thence northward about parallel to said main road and 12 ft. distant from and parallel with the sill of the Community Club by a stake; thence northward 54 ft. to a stake; thence easterly and parallel with the sill of said building and 12 ft. therefrom 54 feet to a stake; thence southerly and parallel with the sill of said building and 12 ft. distant therefrom 64 ft. to a stake on said private way; thence westerly by said private way 54 feet to the point begun at.

It is further understood and agreed that should said building be used as a community club house or hall, all right in the above described lot of land and right of way shall cease at once.

COMPARED

DURHAM COMMUNITY CLUB

CPR

J. B. ...
...
L. C. ...

C. M. P. Co.
BOX NO. 56
ENVE. NO. 33-B
DOC. NO. 15

18 x 186

sect. 64
clad. 50

Know all men by these Presents,

That I, JOHN K. BURNS, of Durham, Androscoggin County, Maine 9/27/27

in consideration of One Dollar and other valuable consideration

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

its Successors ~~HEIRS~~ and Assigns forever,

A certain lot or parcel of land together with the buildings thereon, in the Town of Durham, Androscoggin County, Maine, on the westerly side of the highway leading from Auburn to North Pownal and bounded and described as follows:

Easterly by the above described highway; northerly, westerly and southerly by land now or formerly of Eugene Fredette. Containing about one-half ($\frac{1}{2}$) acre.

The lot herein conveyed being the same conveyed to me by deed from Clarence B. Larrabee, dated *May 17, 1917* and recorded in Androscoggin Registry, Book 276, Page 145.

To have and to hold the aforegranted and bargained premises,
with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its Successors

Heirs and Assigns, to its and their use and behoof
forever.

And I do covenant with the said Grantee, its Successors
and Assigns, that I am lawfully seized in fee of the premises;
that they are free of all incumbrances:

that I have good right to sell and convey the same to the said
Grantee to hold as aforesaid; and that I and my Heirs, shall
and will Warrant and Defend the same to the said Grantee, its Successors

Heirs and Assigns forever, against the lawful claims and demands
of all persons.

In Witness Whereof, the said JOHN E. BURNS, single

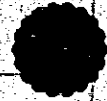
and wife of the said

joining in this deed... Granting... and relinquishing and conveying rights by descent and all other rights... described premises have hereunto set my hand and seal this twenty-seventh day of September in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

[Signature: P. N. Douglas]

[Signature: John E. Burns]



State of Maine, ss. Androscoggin

September 27 19 29

Personally appeared the above named

JOHN E. BURNS

and acknowledged the above instrument to be his free act and deed.

Before me,

[Signature: P. N. Douglas]

Justice of the Peace.

5P
CPR

13

Warranty Deed.

FROM

JOHN E. BURNS

TO

CENTRAL SECURITIES CORPORATION

DATE, SEPTEMBER 27 19 29

State of Maine,
ANDROSOGGIN

ss: Registry of Deeds.

Received DEC 24 1929

at 1 P. M., and
recorded in Book 395, Page 569.

ATTEST:

James O. [Signature]
REGISTRAR

FROM THE OFFICE OF
C. 5P
BOX NO. 50
33-B
13

WORTH & PAUL, PLANNING BOARD REGISTRY, PORTLAND, ME.

COMPARED

Sheet 6 of
Deed 65

9/20/69

Know all Men by these Presents,

That I LEON R. BOWIE
of Durham, in the county of Androscoggin, and State of Maine,
in consideration of One dollar and other valuable
consideration
paid by the CENTRAL SECURITIES CORPORATION, of Augusta, in the
county of Kennebec, and State of Maine,

the receipt whereof I do hereby acknowledge, do hereby
give, grant, bargain, sell and convey unto the said

CENTRAL SECURITIES CORPORATION,
its successors ~~XXXXX~~

and Assigns forever, a certain lot or parcel of land, ~~XXXXXX~~
~~XXXXXXXXXXXXXXXXXXXX~~ situated in Durham in said County of
. . . . Androscoggin , and bounded and described as follows:

Being a strip of land four hundred (400) feet in width extending
from my Northeasterly line at land of Oswald A. Wilson, southerly
to land of Charles W. Larrabee at the Highway leading from the
Androscoggin River to New Gloucester; bounded, NORTHEASTERLY by
land of Oswald A. Wilson, EASTERLY by a line parallel with and
sixty-two and one-half (62½) feet easterly of a certain survey
line now staked out, SOUTHWESTERLY by land of Charles W. Larrabee
at the Highway, WESTERLY by a line parallel with and three hundred
thirty-seven and one-half (337½) feet westerly of the above men-
tioned survey line. Containing about nine and three-quarters acres.
Being a portion of the premises deeded to me by Allen O. Bowie
by deed dated October 26, 1904, and recorded in the Androscoggin
County Registry of Deeds, Book 204, Page 592.

ALSO, another lot or parcel of land, situated in said Durham,
bounded and described as follows:- NORTHWESTERLY by other land of
the within Grantor at the Highway leading from Androscoggin River
to New Gloucester, EASTERLY by a line parallel with and sixty-two
and one-half (62½) feet easterly of a survey line now staked out
(said survey line being on other land of the within Grantor and
land of Charles W. Larrabee), SOUTHWESTERLY by land of Charles W.
Larrabee; being a triangular lot of land at the westerly corner
of my Homestead Farm, and being a portion of the same premises
conveyed to me by two deeds, one from John Bowie, of Lewiston, Me,
and Augusta Wilson, of Durham, children of Melvin Bowie (deceased)
dated October 1, 1913, and recorded in the Androscoggin County
Registry of Deeds, Book 248, Page 49; and the other from Greenleaf
G. Dow as guardian of Mildred E. Dow, dated October 1, 1913, and
recorded in said Registry, Book 319, Page 199. Said triangular
piece hereip conveyed containing about three one-hundredths of an
acre (3/100).

RESERVING to the Grantor herein the wood and timber on the
two above described parcels of land, to be removed by the Grantor
on written request of the Grantee, its successors or assigns; or

if not so removed in season to avoid interference with construction or maintenance work the Grantee reserves the right to remove said wood and timber.

Reserving to the grantor herein an easement or right of way across the above described parcel of land, not to exceed twenty (20) feet in width, to be used for agricultural and lumbering purposes only and in connection with the operation of the parcel ^{land} lying westerly of the parcel herein conveyed, and to be located by the grantor in some location convenient for the said grantor, which shall not however interfere with the use of said strip of land by the grantor, its successors and assigns, or in connection with the transmission of electric energy.

To have and to hold the same, with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its successors

~~XXXXX~~ and Assigns to their use and behoof forever.

And I do covenant with the said Grantee, its successors ~~XXXXX~~ and assigns, that ~~XX~~ I am lawfully seized in fee of the premises; that they are free of all incumbrances, - - - - -

that I have good right to sell and convey the same to the said Grantee, to hold as aforesaid; and that I, and my Heirs will Warrant and Defend the same to the said Grantee, its ^{successors} ~~XXXXX~~ and Assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof I the said Grantor, ~~xxxx~~ LEON R. BOWIE
 and ALMEDA B. BOWIE
 wife of the said LEON R. BOWIE

in testimony of her relinquishment of all her right and title
 by descent, and all other rights in the above-described premises,
 have hereunto set our hands and seals, this twentieth
 day of September, in the year of our Lord one thousand nine
 hundred and twenty-nine.

SIGNED, SEALED AND DELIVERED
 IN PRESENCE OF

A. N. Douglas
to wit

Leon R. Bowie
Almeda B. Bowie

State of Maine, }
 Androscoggin, } ss.

September 30th 1929

Personally appeared the above-named
 LEON R. BOWIE and acknowledged the above
 instrument to be his free act and deed.

Before me,

A. N. Douglas
 Justice of the Peace

CPR (65)

Warranty Deed

FROM

LEON R. BOWIE

TO

CENTRAL SECURITIES CORPORATION

Dated September 30th 19 39.

State of Maine

APPROPRIATE

ss. Registry of Deeds

DEC 24 1929

Received _____ 19__

at 1 h., _____ m., P. M., and

Recorded in Book 394, Page 604

Attest:

James Colley Register

FROM THE OFFICE OF
FRANK J. POWERS
 ATTORNEY AT LAW
 138 Lisbon St.
 LEWISTON, MAINE
 R. Office, State of Maine, Equal Rights, Treasurer, Maine
 ENVELOPE NO. _____
 DOC. NO. _____

COMPARED

THIS AGREEMENT made this twentieth day of September 1929,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine, hereinafter called the "Corporation";

-and- Leon R. Bowie ~~Town or City of~~ Durham

State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning August 1, 1929 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at ~~Town or City of~~ Ansurn, R.F.D. in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

Signed, Sealed and Delivered in presence of:

CENTRAL SECURITIES CORPORATION

By [Signature]
Leon R. Bowie
Licensee.



Bowin, Leon R.

10

NOT RECORDED

IT IS HEREBY ORDERED THAT THE

APPLICANT'S REQUEST FOR A CHANGE IN ZONING FROM R-1 TO R-2 BE GRANTED.

IT IS FURTHER ORDERED THAT THE APPLICANT SHALL COMPLY WITH ALL REQUIREMENTS OF THE ZONING ORDINANCE.

THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.

THIS ORDER IS SUBJECT TO THE APPROVAL OF THE DURHAM PLANNING BOARD.

APPROVED AND ORDERED: [Signature]

DATE: [Date]

BY: [Signature]

THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.

THIS ORDER IS SUBJECT TO THE APPROVAL OF THE DURHAM PLANNING BOARD.

APPROVED AND ORDERED: [Signature]

DATE: [Date]

BY: [Signature]

THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.

THIS ORDER IS SUBJECT TO THE APPROVAL OF THE DURHAM PLANNING BOARD.

APPROVED AND ORDERED: [Signature]

DATE: [Date]

O. M. P. Co.	
BOX NO.	56
FILE NO.	33-B
ACC. NO.	10

2763

(No. 10)

Set 64
Dec 75

Know all men by these Presents,

That We, Leon R. Carleton, and Mildred L. Carleton, husband and wife,
of Pownal, Cumberland County, Maine

in consideration of One Dollar and other valuable consideration,

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec
County, Maine

the receipt whereof we do hereby acknowledge, do hereby give, grant,
bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

Its Successors ~~Heirs~~ and Assigns forever,

A certain lot or parcel of land in the Town of Durham, Androscoggin
County, Maine, and in the Town of Pownal, Cumberland County, Maine,
bounded and described as follows:

Northerly by the highway leading from North Pownal to New Glouces-
ter at land of the Heirs of Caroline G. Ellis; easterly by a line
parallel with and sixty-two and one-half (62½) feet easterly of the
survey line now staked out across our land, and by land now or
formerly of Robert C. Bradbury and land now or formerly of Eliza
T. White, and land now or formerly of William L. Sawyer; southerly
by land now or formerly of Frank H. Turner; westerly by a line paral-
el with and three hundred thirty-seven and one-half (337½) feet
westerly of the survey line now staked out across our land, the
Bradbury lot, the White lot and the Sawyer lot, and by land now
or formerly of Eable G. Sawyer. It is the intention to include
in this conveyance a small triangular lot bounded northerly by land
now or formerly of Robert C. Bradbury; southeasterly by land now
or formerly of Eliza T. White and westerly by a line parallel with
and sixty-two and one-half (62½) feet easterly of the survey line
now staked out across our land. Containing about fifteen (15) acres.

The lot herein conveyed being a portion of the same property
conveyed to us by deed dated March 7, 1916 and recorded in Cumber-
land Registry, Book 963, Page 283. Also a deed from Austin Carey
to L. R. Carleton, dated February 2, 1916 and recorded in Cumberland
Registry, Book 963, Page 154.

Reserving to the grantor herein, two easements or right of way,
across the above described parcel of land, not to exceed twenty (20)
feet in width, and to be used for agricultural purposes and lumbering
purposes only, and to be located by the grantee in some location
convenient for the said grantor and which will not however,
interfere with the use of the said above described parcel by said
grantee, or in connection with the transmission of electric energy.

Reserving also to the grantor herein the wood and lumber on
said parcel, said wood and lumber to be removed by the grantor
on written request of the grantee. Or, if not removed by the grantor
in season to avoid interference with construction or maintenance
work, the grantee may cut, or cut, remove and dispose of said wood
and lumber at its option.

To have and to hold the aforegranted and bargained premises,
 with all the privileges and appurtenances thereof to the said
 CENTRAL SECURITIES CORPORATION, its Successors

Heirs and Assigns, to its and their use and behoof
 forever.

And we do covenant with the said Grantee, its Successors
 and Assigns, that we are lawfully seized in fee of the premises;
 that they are free of all incumbrances;

that we have good right to sell and convey the same to the said
 Grantee to hold as aforesaid; and that we and our Heirs, shall
 and will Warrant and Defend the same to the said Grantee, its Successors

Heirs and Assigns forever, against the lawful claims and demands
 of all persons.

In Witness Whereof, the said Leon R. Carleton, and Mildred L. Carleton, wife of the said Leon R. Carleton; and Mildred L. Carleton and Leon R. Carleton, husband of the said Mildred L. Carleton

and ~~wifexofthexsaid~~

joining in this deed as Grantors, and relinquishing and conveying their rights by descent and all other rights in the above described premises have hereunto set our hands and seals this first day of October in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

A. N. Douglas
to both

Leon R. Carleton
Mildred L. Carleton
Leon R. Carleton
Mildred L. Carleton



State of Maine, } ss.
Cumberland

October 1st 19 29

Personally appeared the above named

LEON R. CARLETON & MILDRED L. CARLETON and acknowledged the above instrument to be their free act and deed.

Before me,

A. N. Douglas

Justice of the Peace.

65

#2763

SURPLINE 28

Warranty Deed.

FROM

LEON R. CARLTON & MILDRED L. CARLTON

TO

CENTRAL SECURITIES CORPORATION

DATED, OCTOBER 1, 1929

State of Maine.

AND COUNTY OF COCUMSCUSSUM: Registry of Deeds.

Received DEC 24 1929

at 9:11 A.M., and

recorded in Book 397, Page 602

Attest: *James B. ...*
REGISTRAR

FROM THE OFFICE

DOX NO. 54

JUNE NO. 33-B

BOOK NO. 20

SMITH & BIRD, P. ... DURHAM, N.H.

9-1

COMPARED

STATE OF MAINE
Cumberland, ss. REGISTRY OF DEEDS
Received, FEB 27 1930
at 9:11 A.M., and recorded
in Book 1342, Page 28.

Attest: *James B. ...*
REGISTRAR

1 No 18.

Know all men by these Presents,

Sheet 2 of 4
Book 73
9/21/29

That we, LIZZIE D. PERKINS, of Durham, Androscoggin County, Maine, and VIVIAN M. SAWYER, of Durham, said County and State, sole heirs at Law of Caroline G. Ellis, late of Durham, County and State aforesaid,

in consideration of One Dollar and other valuable consideration,

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine,

the receipt whereof We do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said CENTRAL SECURITIES CORPORATION,

its successors ~~and assigns~~ and Assigns forever,

A strip of land four hundred (400) feet in width, extending from our Northerly to our Southerly line and bounded and described as follows:

Northerly by land now or formerly of Cyrus G. Penley, and land now or formerly of Myron L. Fickett; Easterly by a line parallel with and Sixty-two and one half (62½) feet Easterly of the survey line now staked out across our land; Southerly by the highway leading from North Pownal to New Gloucester at land now or formerly of Leon R. Jarleton; Westerly by a line parallel with and three hundred thirty-seven and one-half (337½) feet Westerly of the survey line above mentioned and by land now or formerly of Myron L. Fickett. Containing about ten and forty-five one-hundredths (10 45/100) acres.

Being a portion of the same property conveyed to Caroline G. Ellis by Cora L. Hayes, in her capacity as Executrix, by Deed, dated February 19th, 1917, and recorded in the Androscoggin County Registry of Deeds, Book 273, Pages 115 and 116, and we derive title to the above described premises as sole heirs at Law of the said Caroline G. Ellis, late of Durham, deceased.

~~Reserving to the Grantors herein the wood and lumber on said parcel, said wood and lumber to be removed by the Grantors on written request of the Grantee. Or, if not removed by the Grantors in season to avoid interference with construction or maintenance work, the Grantee may cut, or cut, remove and dispose of said wood and lumber at its option.~~

Reserving to the grantors herein a right of way not exceeding 20 feet wide, across said strip to be used only for agricultural and lumbering purposes and in connection with the operation of other land of the grantors lying westerly of said strip, to be located by the grantors in some location convenient for the grantors, but which shall not be used, however, so as to interfere with the use of the said strip by the grantor, its successors and assigns, or with the transmission of electric energy.

To have and to hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof to the said CENTRAL SECURITIES CORPORATION, its successors

Heirs and Assigns, to its and their use and behoof forever.

And to do covenant with the said Grantee, its ^{SUCCESSORS} ~~HEIRS~~ and Assigns, that we are lawfully seized in fee of the premises; that they are free of all incumbrances;

that we have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that we and our Heirs, shall and will Warrant and Defend the same to the said Grantee, its

^{SUCCESSORS} ~~HEIRS~~ and Assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said LIZZIE D. PERKINS, and VIVIAN M. SAWYER, and *Edith W. Sawyer, husband of the said Vivian M. Sawyer*

and EDWARD L. PERKINS, ^{husband} ~~wife~~ of the said LIZZIE D. PERKINS,

joining in this deed as Grantors, and relinquishing and conveying their rights by descent and all other rights in the above described premises have hereunto set our hands and seals this twenty-seventh day of September, in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

A. N. Douglas
to each

Lizzie D. Perkins
Vivian M. Sawyer
Edward L. Perkins
Edith W. Sawyer

State of Maine, |
ANDROSCOGGIN | ss.

SEPTEMBER 27th, 1929.

Personally appeared the above named LIZZIE D. PERKINS and Vivian M. Sawyer,

and acknowledged the above instrument to be their free act and deed.

Before me,

A. N. Douglas
Justice of the Peace.

(25)

C.P.R.
Warranty Deed. 18

FROM

LIZZIE D. PERKINS
and
VIVIAN M. SAWYER

TO

CENTRAL SECURITIES CORPORATION

DATED, SEPTEMBER 27th, 1929.

State of Maine.

ANDROSCOGGIN ss: Registry of Deeds.

Received DEC 24 1929 -19

at 1 H. - N. P. M., and
recorded in Book 397, Page 595.

ATTEST:

James Bellefleur
Register

FROM THE OFFICE OF

FRANK T. POWERS

50
33-B
18
DEC 18 1929

WITH & SONS, Publishers, 47 Exchange Street, Portland, Maine

COMPARED

5/2/30

KNOW ALL MEN BY THESE PRESENTS

That MECHANICS SAVINGS BANK, a banking corporation duly organized and existing under the laws of the State of Maine and having a place of business at Auburn, in the County of Androscoggin and said State, mortgagee under a certain mortgage made and entered into by and between Lizzie B. Perkins and Vivian M. Sawyer and said Mechanics Savings Bank, said mortgage being dated March 11, 1920 and recorded in Androscoggin County registry of deeds, book 206, page 360, for consideration paid, hereby releases to said Lizzie B. Perkins and Vivian M. Sawyer all right, title and interest acquired under and by virtue of said mortgage in and to that portion of the mortgaged premises bounded and described as follows:

So much of said mortgaged property as lies within a strip of land 400 feet in width bounded on the north by property now or formerly of Cyrus A. Bouley, on the south by land now or formerly of Label G. Sawyer, on the east by a line parallel with and 32 1/2 feet easterly of the survey line as now laid out for the Portland-Lewiston transmission line of Central Maine Power Company, and on the west by a line parallel with and 337 1/2 feet westerly of said survey line.

This release shall in no way affect or impair the right of said Mechanics Savings Bank, mortgagee as aforesaid, to hold under said mortgage as security for the sum remaining due thereon, or to foreclose under the terms of said mortgage, all the remainder of the premises conveyed therein and not hereby released; and this release is given without warranty express or implied.

IN WITNESS WHEREOF, the said Mechanics Savings Bank has caused its corporate name to be signed and its corporate seal affixed by *J. C. Litchell* its *Treasurer* thereunto duly authorized, this *8th* day of *May* 1930.

Signed, Sealed and Delivered in the presence of *Frank F. Brown*

MECHANICS SAVINGS BANK
By *J. C. Litchell, Treas.*



STATE OF MAINE
Androscoggin, SS.

Personally appeared the above named *J. C. Litchell* *May 8 1930.* and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Mechanics Savings Bank.

Before me,

Frank F. Brown

~~Notary Public~~
Justice of the Peace.

Release of Mortgage No. 18.

Mechanics Savings Bank

to

Lizzie B. Perkins et al

Androscoggin, ss. REGISTRY OF DEEDS
 Received MAY 17 1930
 at 10 11 50 A. M. and Recorded in
 Book 417 Page 424
 Attest: James Bell
 Deputy Register.

C. M. P. Co.
 BOX NO. 50
 RIVE. NO. 33-B
 DEC. NO. 11

18

Saragov, Vivian M.

Has an agreement
Company's copy
not filed out
for lack of blanks
A.N.D.

~~O. M. P. O.
MIX NO. 50
INVE. NO. 33-13
DOC. NO. 18~~

O. M. P. O.
MIX NO. 50
INVE. NO. 33-13
DOC. NO. 18

*Some not actual but under
power could still be used
John D. Phillips - 10/18/67*

MEMORANDUM OF AGREEMENT

Made the Sixth day of December, 1933 in duplicate
between the CENTRAL MAINE POWER COMPANY, a corporation
duly established by law, Party of the First Part, and
LEON R. CARLTON of North Pownal, Cumberland County, Maine,
Party of the Second Part,

WITNESSETH: That the said party of the first part, in
consideration of the covenants and agreements herein con-
tained on the part of the said party of the second part,
to be kept and performed by him, the said party of the first
part hereby leases unto the said party of the second part
the following rights, privileges and easements:

- (A) To lay and maintain under and across the land of
party of the first part in the town of Durham,
Androscoggin County, Maine, a two-inch (or
smaller) water pipe upon the terms and condi-
tions hereinafter set forth.
- (B) To take water from a spring located on land of
the party of the first part in the town of Dur-
ham, Androscoggin County, Maine, through said
pipe for use at the homestead buildings of the
party of the second part located in the town
of Pownal, Cumberland County, Maine, upon the
terms and conditions hereinafter set forth.

TO HOLD for the term of one year from the Sixth day of
December, 1933, and this lease to continue in effect until
same is cancelled by either party as hereinafter provided;
yielding and paying therefor each year during the duration
of this lease, the sum of One Dollar, on the first day of
June of each year. This lease may be terminated at the end
of the one year term, or subsequently, by either party
giving the other three calendar months previous notice in
writing.

A general description of the location of the pipe line
and spring is as follows:

REPRODUCTION OF VOUCHER

-2-

- (C) The spring above referred to is located on land formerly owned by Lizzie D. Perkins and Vivian M. Sawyer on the northeasterly side of the highway leading from North Pownal northwesterly and near the town line between Pownal and Durham. The spring being about one hundred feet (100') northeasterly of said road.
- (D) The location of the pipe line to be as now laid, from the spring southerly to the easterly line of land of the party of the first part.

The party of the second part covenants with the party of the first part:

- (1) To pay the said rent in the manner aforesaid.
- (2) At the expiration of this lease to leave the premises in good condition.
- (3) To indemnify, protect and save harmless, the party of the first part from and against all claims, suits, costs, charges and damages made upon or incurred by the party of the first part in connection with this agreement and/or lease.
- (4) To reimburse said party of the first part for all expenses occasioned to it by reason of the permission herein given, including cost of preparing this agreement and necessary survey in the amount of Ten Dollars (\$10.00).

The covenants and agreements herein shall extend to and be binding upon the heirs, executors, administrators, successors and assigns of the parties to this lease.

In case it shall be necessary for the first party to give notice of any kind to the second party, the same shall be given, and shall be complete, by sending such notice to the second party by United States Registered Mail, addressed to the second party at the address herein given.

In case it shall be necessary for the second party to give notice of any kind to the first party, the same shall be given, and shall be complete, by sending such notice to the first party by United States Registered Mail, addressed to the first party at the address herein given.

-2-

-3-

IN WITNESS WHEREOF, the parties have interchangeably set their hands and seals the day and year first above written.

Signed, Sealed and Delivered in the presence of

J.S. Williams
Party of the First Part

Lynn R. Bowie

Lynn R. Bowie
Party of the Second Part

Handwritten signature

C. M. P. Co.	
BOX NO.	<i>66</i>
ENVE. NO.	<i>139</i>
DOC. NO.	

C. M. P. CO. MUTATIONS	
OPER. DEPT. OK AS TO SUBSTANCE	<i>W.A.</i>
LEGAL DEPT. OK AS TO FORM	<i>Form not good - but passed</i>
TREAS. DEPT. NOTED & APPROVED	
CLAIMS DEPT. NOTED & APPROVED	<i>M.E.</i>
WORKER	<i>25.5</i>
NOTED	
FILED	
RECORDS	
DATE FOR FILING	<i>ESL</i>

Form not good - but passed
W.A.

2762

(No. 183)

Dist. 6
Dec 74
10/16/29

Know all men by these Presents,

That **MABEL G. SAWYER**, of Durham, Androscoggin County, Maine

in consideration of One Dollar and other valuable consideration

paid by the **CENTRAL SECURITIES CORPORATION**, of Augusta, Kennebec County, Maine

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

Its Successors **Heirs and Assigns forever.**

A certain lot or parcel of land in the Town of Durham, Androscoggin County, Maine, and in Fernal, Cumberland County, Maine, on the southerly side of the highway leading from North Fernal to New Gloucester, bounded and described as follows:

The lot being triangular in form, bounded northerly by the highway above mentioned; southeasterly by land now or formerly of Leon R. Carleton, et al; westerly by a line parallel with and three hundred thirty-seven and one-half feet westerly of the survey line now staked out across land now or formerly of the Heirs of Caroline G. Ellis, and land now or formerly of Leon R. Carleton, et al. Containing about one quarter ($\frac{1}{4}$) acre.

The lot herein conveyed being a portion of the same property which I inherited from my husband, the late Alfred Sawyer. Also by deed from Etta Shaw and Mildred Jones, my daughters, dated June 6, 1927 and recorded in Cumberland Registry, Book 1277, Page 107.

The buildings located on this lot to be removed by me on or before April 1, 1930.

Reserving to the grantor herein, the right to use water from a certain well on the lot herein conveyed. Said use to be by means of an under-ground pipe or by carrying in pails. Said well being the one located about ten (10) feet easterly of the westerly line of said four hundred (400) foot strip. Said use of said water being for my farm buildings.

To have and to hold the aforegranted and bargained premises,
with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its Successors

Heirs and Assigns, to its and their use and behoof
forever.

And I do covenant with the said Grantee, its Successors
and Assigns, that I am lawfully seized in fee of the premises;
that they are free of all incumbrances;

that I have good right to sell and convey the same to the said
Grantee to hold as aforesaid; and that I and my Heirs, shall
and will warrant and defend the same to the said Grantee, its Successors

Heirs and Assigns forever, against the lawful claims and demands
of all persons.

In Witness Whereof, the said MABEL G. SAWYER, single

and ~~xx~~

~~wife of the said~~

~~joining in this deed as Grantor and relinquishing and conveying~~

~~rights by descent and all other rights in the above~~


~~described premises~~ have hereunto set my hand and seal this

sixteenth day of October in the year of our Lord

one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered
in presence of

A. J. Douglas

Mabel G. Sawyer 

State of Maine,
Androscoggin

} no.

October 16 19 29

Personally appeared the above named

MABEL G. SAWYER

and acknowledged the above instrument to be her free act and deed.

Before me,

A. J. Douglas

Justice of the Peace.

11-17-20

(64)

2/19

Warranty Deed. C.P.R.

FROM

MADEL G. SAWYER

TO

CENTRAL SECURITIES CORPORATION

DATED OCTOBER 16 1920

State of Maine
ANDROSCOGGIN

ss: Registry of Deeds.

Received DEC 24 1920

at 1 P. M. and recorded in Book 395, Page 566

ATTEST:

James W. [Signature]
REGISTRY OF DEEDS

FROM THE OFFICE OF

C. M. A. 50
CAX NO. 53
DOC. NO. 228

SMITH & BAIN, Publishers, 45 Exchange St., Portland, Me.

9

Attest: *[Signature]*
in Book 1342 Page 22
at 9 H. M. and recorded
Received, FEB 27 1930
Quarford, ss. REGISTRY OF DEEDS
STATE OF MAINE

(No. 156)

Sept. 24
1929

Know all men by these Presents,

9/10/29

That I, NEWTON S. STOWELL, of Dixfield, Oxford County, Maine

in consideration of One Dollar and other valuable consideration,

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Sebec County, Maine

the receipt whereof, I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

ITS Successors ~~Heirs~~ and Assigns forever,

A certain lot or parcel of land in the Town of Durham, Androscoggin County, Maine, bounded and described as follows:

A strip of land four hundred (400) feet in width extending from my northerly line in a south westerly direction to my southerly line and bounded northerly by land of Edward L. and Lizzie D. Perkins; easterly by a line parallel with and sixty-two and one-half (62½) feet easterly of the survey line now staked out across said lot; southerly by land of Oswald Wilson and Willard D. Bowie; westerly by a line parallel with and three hundred thirty-seven and one-half (337½) feet westerly of the survey line above mentioned.

The above lot being a part of the property to which I derived title under the foreclosure of a mortgage given by John B. Libby to Newton S. Stowell dated June 23, 1920 and recorded in Androscoggin Registry, Book 285, Page 355. Said foreclosure proceedings being recorded in Androscoggin Registry, Book 364, Page 614.

Reserving to the grantor herein, an easement or right of way across the above described parcel of land, not to exceed twenty (20) feet in width and to be located by the grantee in some location convenient for the said grantor and which will not however, interfere with the use of the said above described parcel by said grantee, or in connection with the transmission of electric current.

To have and to hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its successors

and Assigns, to its and their use and behoof forever.

And I do covenant with the said Grantee, its Successors and Assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my Heirs, shall and will Warrant and Defend the same to the said Grantee,

its successors and Assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Newton S. Stowell, *single*

~~and~~ ~~wife of the said~~

~~Newton S. Stowell~~

~~joining in this deed as Grantor, and relinquishing and conveying~~
~~her~~ ~~rights by descent and all other rights in the above~~
~~described premises have hereunto s t~~ ^{one} ~~hand and seal~~ ^{my} this
10th day of September in the year of our Lord
one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered
in presence of

A. N. Douglas

Newton S. Stowell

State of Maine, }
Oxford } ss.

September 11, 19 29

Personally appeared the above named

Newton S. Stowell

and acknowledged the above instrument to be his free act and
deed.

Before me,

A. N. Douglas

Justice of the Peace.

C P R (52)

Warranty Deed.

FROM

NEWTON S. STOWELL

TO

CENTRAL SECURITIES CORPORATION

DATED, September 10 1929

State of ~~Mississippi~~
ANDROSCOGGIN ss: Registry of Deeds.

Received DEC 24 1929 -19-

at 1 P. M., and
recorded in Book 395, Page 574

ATTEST:
James Allen
REGISTRAR

FROM THE OFFICE OF

C. M. P.
EX. NO. 50
33B
H.C. NO. 4

SMITH & BALE, Publishers, 47 Exchange St., Portland, Me.

COMPIRED

Rec'd by
Seal by
9/20/29

Know all Men by these Presents,

That I OSWALD A. WILSON
of Durham, in the county of Androscoggin, and State of Maine

in consideration of one dollar and other valuable
consideration
paid by CENTRAL SECURITIES CORPORATION.
of Augusta, in the county of Kennebec, and State of Maine,

the receipt whereof I do hereby acknowledge, do hereby
give, grant, bargain, sell and convey unto the said

CENTRAL SECURITIES CORPORATION, its successors
Heirs

and Assigns forever, a certain lot or parcel of land, ~~xxxxxx~~
~~xxxxxx~~ situated in Durham in said County of
. Androscoggin , and bounded and described as follows:

Being a strip of land four hundred (400) feet wide and extending
from my Northwesterly line at land of Willard D. Bowie, southerly
to my southwesterly line at land of Leon R. Bowie; bounded
NORTHWESTERLY by land of Willard D. Bowie; EASTERLY by a line
parallel with and sixty-two and one-half (62½) feet Easterly of
a certain survey line now staked out; SOUTHERLY by land of Leon
R. Bowie; WESTERLY by a line parallel with and three hundred
thirty-seven and one-half (337½) feet Westerly of the above
mentioned survey line. Containing about twenty-three and thirty-
eight one hundredths (23.38) acres.

Being a portion of the same premises conveyed to me by two
deeds, one from Greenleaf G. Dow to me (under the name of Oswald
A. Dyer), dated April 18, 1908, and recorded in the Androscoggin
County Registry of Deeds, Book 225, Page 192, the conditions
named in said deed have been by me fully met and complied with;
the other by a deed from Leon R. Bowie, to me, ~~by deed~~ dated
May 3, 1915, and recorded in said Registry, Book 262, Page 497.

RESERVING to the Grantor herein two (2) easements or right

of ways across the above described parcel of land, each not to exceed twenty (20) feet in width, one to be used as a cattle lane and the other to be used for agricultural and lumbering purposes only and in connection with the operation of the parcel of land lying westerly of the land herein conveyed, and to be located by the Grantee in some location convenient for the said Grantor, which will not, however, interfere with the use of said above described parcel by the said Grantee, its successors and assigns, or in connection with the transmission of electric energy.

ALSO RESERVING to the Grantor herein the wood and timber on the above described parcel, to be removed by the Grantor on written request of the Grantee, its successors or assigns; or, if not so removed in season to avoid interference with construction or maintenance work, the Grantee reserves the right to remove said wood and timber.

* * * * *

To have and to hold the same, with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its successors

~~heirs~~ and Assigns to

their use and behoof forever.

And I do covenant with the said Grantee, its successors ~~heirs~~ and assigns, that ~~xx~~ I am lawfully seized in fee of the premises; that they are free of all incumbrances, - - - - -

that I have good right to sell and convey the same to the said Grantee, to hold as aforesaid; and that I, and my ~~heirs~~ successors will warrant and defend the same to the said Grantee, its ~~heirs~~ and Assigns forever, against the lawful claims and demands of all persons.

THIS AGREEMENT made this twenty first day of September 1929,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine, hereinafter called the "Corporation";

-and- Oswald A. Wilson Town or City of Durham

State of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning August 1, 1929 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Amherst, R. F. D. in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above written.

Signed, Sealed and Delivered
in presence of:

CENTRAL SECURITIES CORPORATION
By [Signature]
Oswald A. Wilson
LICENSEE

Copy

Durham, Maine, Sept. 20, 1929.

To

Ronald P. Nelson
Durham, Maine

You are hereby notified and requested
and given permission to cut and
remove such portion of the wood
and timber on that part of a certain
strip of land this day deeded ^{to the said Nelson} by me
to the Central Securities Corporation, as is
not to be used by the said Corporation
its successors and assigns, for the
construction of an electric transmission
line during the year 1929, viz. - a strip
275 feet wide from the westerly side.
Such removal to be accomplished
in season to avoid interference with
construction or maintenance work
by the said Corporation, its successors
and assigns.

Central Securities Corporation
By A. D. Douglas

Wilson, Oswald A.
Land in Durham
Notice to cut stumpage

RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS FOR THE COUNTY OF DURHAM, NORTH CAROLINA, THIS 15th DAY OF FEBRUARY, 1954.

In Witness Whereof I the said Grantor, ~~XXXX~~ OSWALD A. WILSON

and REBECCA A. WILSON

wife of the said OSWALD A. WILSON

in testimony of her relinquishment of all her right and title by descent, and all other rights in the above-described premises, have hereunto set our hands and seals, this ...twentieth..... day of ..September.. in the year of our Lord one thousand nine hundred and twenty-nine.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

A. N. Douglas
to wit

Oswald A. Wilson
Rebecca A. Wilson



State of Maine, }
Androscoggin, } ss.

September 20th 19 29

Personally appeared the above-named

OSWALD A. WILSON

and acknowledged the above

instrument to be his free act and deed.

Before me,

A. N. Douglas
Justice of the Peace

Sept. 6 4
Recd 58

(No. 106)

Know all men by these Presents,

That I, Richard H. Norris of Durham, Androscoggin County, Maine

in consideration of One Dollar and other valuable consideration

paid by the CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine

the receipt whereof, I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

Its Successors ~~and~~ and Assigns forever,

A certain lot or parcel of land in the Town of Durham, Androscoggin County, Maine, bounded and described as follows:

A strip of land extending across my farm from its northerly to its southerly line and bounded northerly by land of Clyde L. Hall; easterly by a line parallel with and sixty-two and one-half (62½) feet westerly of the survey line now staked out; southerly by land of Harold L. Redding; westerly by a line parallel with and three hundred and thirty-seven and one-half (337½) feet westerly of the survey line now staked out.

The above four hundred (400) foot strip being a portion of the property conveyed to me by deed from *Samuel Perkins* dated July 16, 1928 and recorded in Androscoggin Registry, Book 385, Page 94.

*added
B
W
9/11/58*

Reserving to the grantor herein, an easement or right of way across the above described parcel of land, not to exceed twenty (20) feet in width and to be located by the grantee in some location convenient for the said grantor and which will not however, interfere with the use of the said above described parcel by said grantee, or in connection with the transmission of electric current.

To have and to hold the aforegranted and bargained premises,
with all the privileges and appurtenances thereof to the said

CENTRAL SECURITIES CORPORATION, its successors

~~ESTES~~ and Assigns, to its ~~ESTES~~ and their use and behoof
forever.

And I do covenant with the said Grantee, its ~~ESTES~~ ^{SUCCESSORS}
and Assigns, that I am lawfully seized in fee of the premises;
that they are free of all incumbrances;

that I have good right to sell and convey the same to the said
Grantee to hold as aforesaid; and that I and my Heirs, shall
and will warrant and defend the same to the said Grantee,

its successors

~~ESTES~~ and Assigns forever, against the lawful claims and demands
of all persons.

In Witness Whereof, the said Richard H. Norris

and Cora E. Norris wife of the said Richard H. Norris

joining in this deed as Grantor ; and relinquishing and conveying her rights by descent and all other rights in the above described premises have hereunto set our hands and seals this Fifth day of September in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

A. N. Douglas
to both

Richard H. Norris
Cora E. Norris



State of Maine,
Androscoggin

} ss.

September 7 19 29

Personally appeared the above named

Richard E. Norris

and acknowledged the above instrument to be his free act and deed.

Before me,

A. N. Douglas

Justice of the Peace.

CPR

(CPR)
3

Warranty Deed.

FROM

RICHARD H. NORRIS

TO

CENTRAL SECURITIES CORPORATION

DATED, September 5, 19 29

State of Maine,
ANDROSCOGGIN es: Registry of Deeds.

Received, DEC 11 1929

at 7 H., 410 M., a M., and
recorded in Book 395, Page 540

ATTEST:

James D. Bell REGISTER

FROM THE OFFICE OF

C.M.P.
50
33-B
35
DOC. NO.

SMITH & SALK, Publishers, 65 Exchange St., Portland, Me.

COMPARED

THIS AGREEMENT made this seventh day of September 1929,

BY AND BETWEEN:

CENTRAL SECURITIES CORPORATION, of Augusta, Kennebec County, Maine, hereinafter called the "Corporation";

-and- Richard H. Norris of Durham Town or City of Maine hereinafter called the "Licensee",

WITNESSETH THAT:

Whereas the Corporation has purchased a certain strip of land from the Licensee and the continued use of said strip of land by the Licensee appears advantageous to both parties,

NOW THEREFORE:

It is mutually agreed as follows:-

1. That in consideration of the covenants herein contained on the part of the Licensee to be kept and performed by him or her (or by him and her), the Corporation hereby grants permission to the Licensee to use said strip of land for agricultural purposes.
2. The Licensee shall not assign the rights herein granted to any person, firm or corporation without the written consent of the Corporation.
3. The rights herein granted by the Corporation to the Licensee shall in no way interfere with the use of said strip of land by the Corporation or its successors or assigns in connection with the construction, operation and maintenance of electric transmission lines along and/or across said strip of land.
4. This Agreement shall take effect at the date hereof and shall continue in force until either of the parties hereto shall fix the date of the termination thereof by a written notice of one hundred and fifty (150) days prior to said date of termination to the other party hereto.
5. The Licensee shall indemnify, protect and save harmless the Corporation from and against all claims, suits, costs, charges and damages made upon or incurred by the Corporation in connection with this License.
6. In consideration of this License the Licensee shall pay to the Corporation the sum of One Dollar (\$1.00) per year or fraction thereof, beginning August 1, 1929 and subsequent payments to be made on the first day of August in each year during the continuation of this Agreement.
7. Any notice given by the Corporation to the Licensee shall be deemed to be properly served if the notice be delivered to the Licensee or if deposited in the Post Office, post paid, addressed to the Licensee at Town or City of Auburn, P. E. S. in the State of Maine last known place of business.

IN WITNESS WHEREOF the parties hereto have executed this agreement on the day and year first above writton.

Signed, Sealed and Delivered in presence of:

CENTRAL SECURITIES CORPORATION

By Richard H. Norris
Licensee.

Norris, Richard H.

3

C. M. P. Co.
 BOX NO. 50
 ENVE. NO. 33-B
 P.O. NO. 3

IN THE MATTER OF
 THE APPLICATION OF
 RICHARD H. NORRIS
 FOR A PLANNING BOARD
 IN THE CITY OF DURHAM
 NORTH CAROLINA

THE BOARD OF PLANNING AND ZONING
 HAS CONSIDERED THE APPLICATION OF
 RICHARD H. NORRIS FOR A PLANNING BOARD
 IN THE CITY OF DURHAM, NORTH CAROLINA,
 AND HAS DEEMED IT ADVISABLE TO
 GRANT HIS APPLICATION.

IT IS THE ORDER OF THE BOARD OF
 PLANNING AND ZONING THAT THE
 APPLICATION OF RICHARD H. NORRIS
 FOR A PLANNING BOARD IN THE CITY OF
 DURHAM, NORTH CAROLINA, BE GRANTED.

IN WITNESS WHEREOF, THE BOARD OF
 PLANNING AND ZONING HAS CAUSED
 THESE RESOLUTIONS TO BE SIGNED
 AND SEALED THIS 15th DAY OF
 APRIL, 1964.

ATTEST:
 SECRETARY

Know all men by these Presents,

That I, WILLARD D. BOWIE, of Durham, Androscoggin County, Maine

in consideration of One Dollar and other valuable consideration

paid by the CENTRAL SECURITIES CORPORATION of Augusta, Kennebec County, Maine

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said

CENTRAL SECURITIES CORPORATION

its successors ~~Heirs~~ and Assigns forever,

A certain lot or parcel of land in the Town of Durham, bounded and described as follows:

Northeasterly by land of Newton S. Stowell; southeasterly by land of Oswald A. Wilson; westerly by a line parallel with and three hundred thirty-seven and one-half feet westerly of the survey line now staked out. The above lot being a triangular lot of land at the easterly corner of a certain lot of land conveyed to me by Daniel Bowie by deed dated May 26, 1883, and recorded in Androscoggin Registry, Book 113, Page 35.

Reserving to the grantor herein, an easement or right of way across the above described parcel of land not to exceed twenty (20) feet in width and to be located by the grantee in some location convenient for the said grantor and which will not however, interfere with the use of the said above described parcel by said grantee, or in connection with the transmission of electric current.

Reserving also to the grantor herein the wood and lumber on said parcel, said wood and lumber to be removed by the grantor on written request of the grantee. Or, if not removed by the grantor in season to avoid interference with construction or maintenance work, the grantee may cut, or cut, remove, and dispose of said wood and lumber at its option.

To have and to hold the aforegranted and bargained premises,
with all the privileges and appurtenances thereof to the said
CENTRAL SECURITIES CORPORATION, its successors

Heirs and Assigns, to its and their use and behoof
forever.

And I do covenant with the said Grantee, its successors
and Assigns, that I am lawfully seized in fee of the premises;
that they are free of all incumbrances;

that I have good right to sell and convey the same to the said
Grantee to hold as aforesaid; and that I and my Heirs, shall
and will Warrant and Defend the same to the said Grantee, its successors
Heirs and Assigns forever, against the lawful claims and demands
of all persons.

In Witness Whereof, the said WILLARD D. BOWIE

and Maria L. Bowie wife of the said Willard D. Bowie

joining in this deed as Grantor, and relinquishing and conveying her rights by descent and all other rights in the above described premises have hereunto set our hand and seal this 12th day of September in the year of our Lord one thousand nine hundred and twenty-nine.

Signed, Sealed and Delivered in presence of

A. N. Douglas
to both

Willard D. Bowie
Maria L. Bowie



State of Maine,)
Androscoggin) ss.

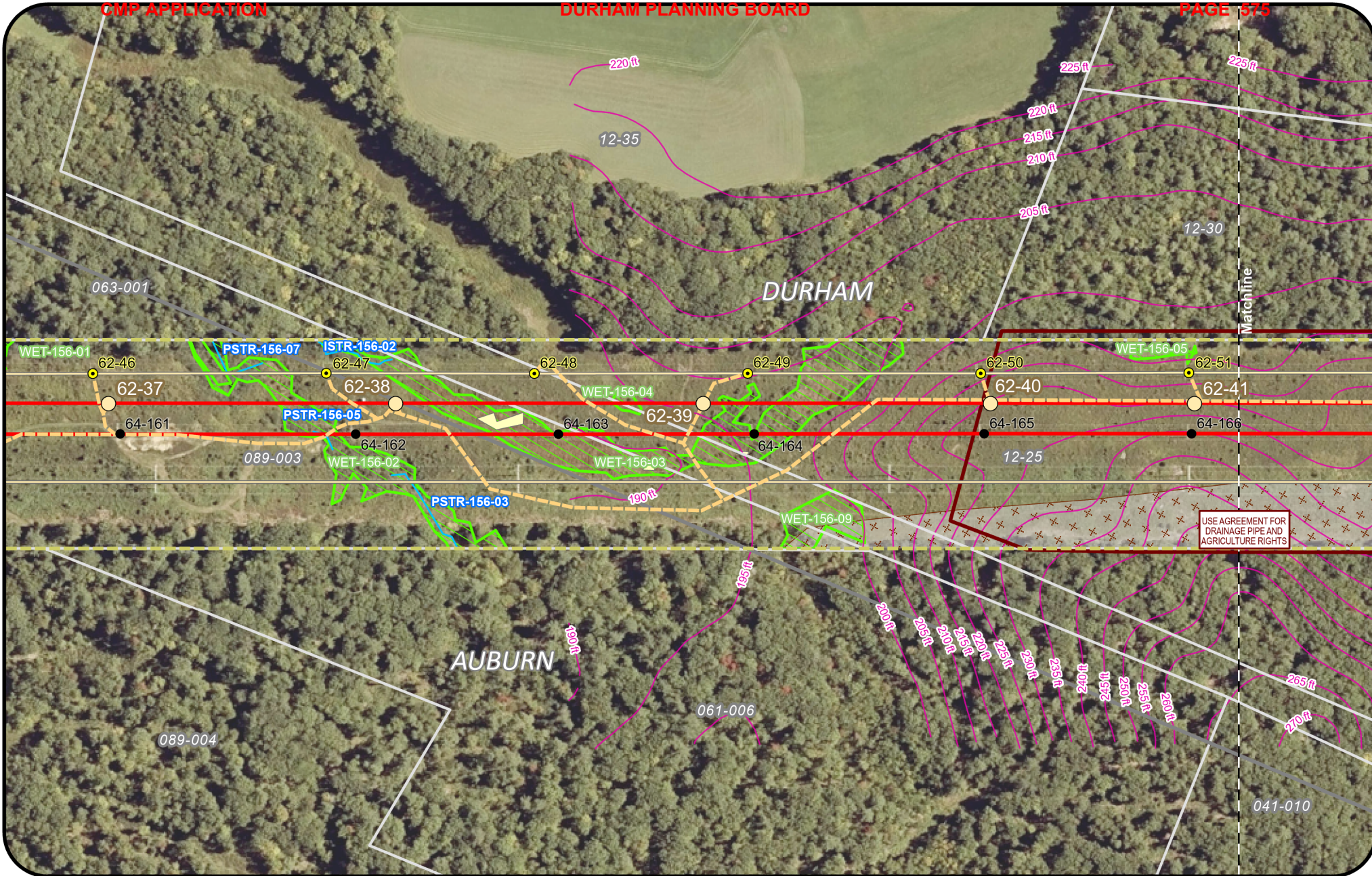
September 12, 1929

Personally appeared the above named WILLARD D. BOWIE and acknowledged the above instrument to be his free act and deed.

Before me,

A. N. Douglas
Justice of the Peace.

EXHIBIT 4 PROJECT SCOPE AND NATURAL RESOURCE MAPS



Legend

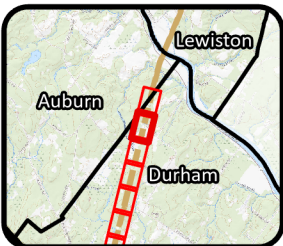
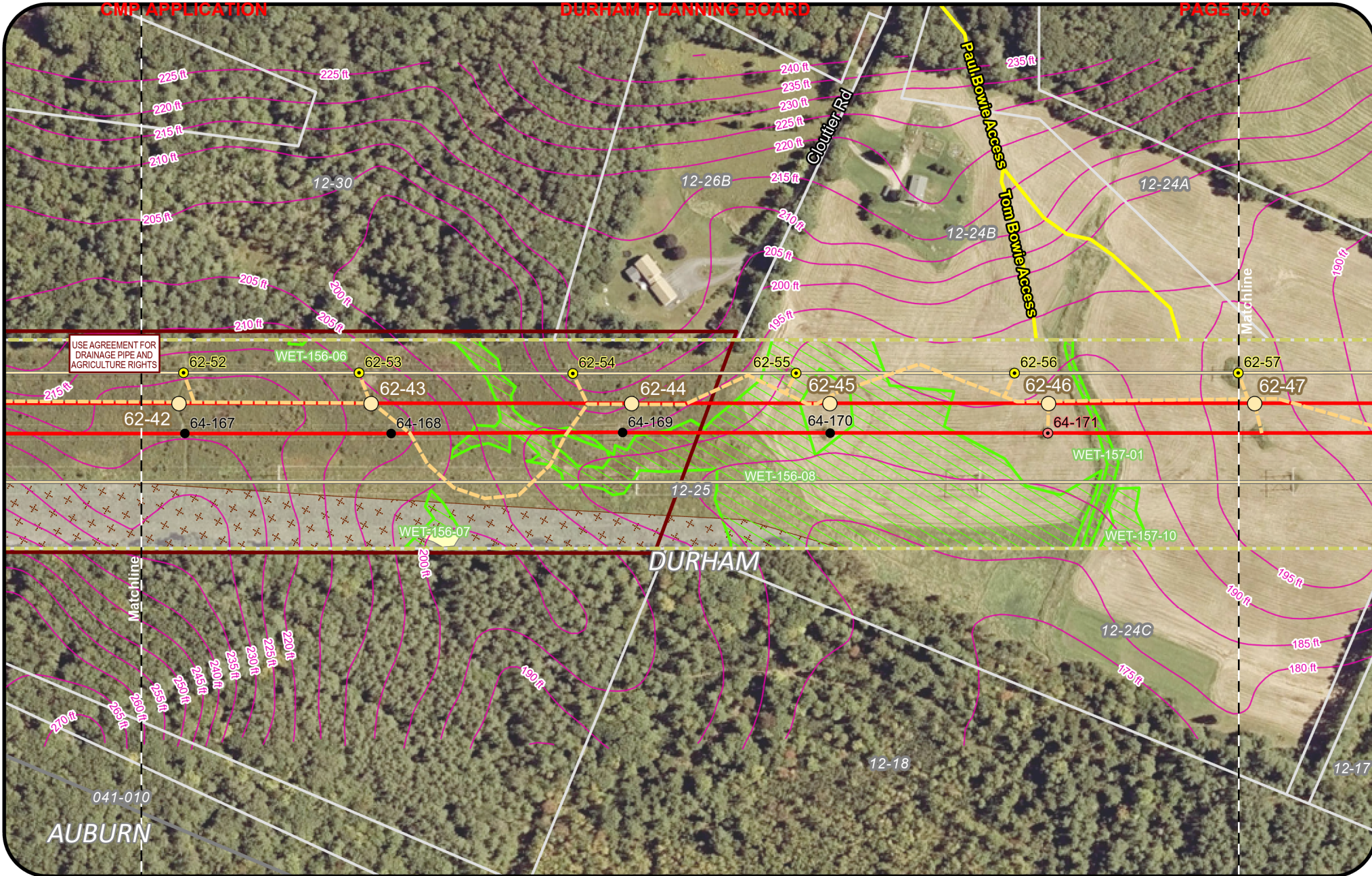
Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Demolition Pole	R, T, and E Species	Use Agreement Parcel
Project Centerline	Contour	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Stream	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Wetland	Deer Wintering Area	100-Year Floodway
Existing Access Road	SVP/ PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application
250
Feet



CENTRAL MAINE POWER



Legend

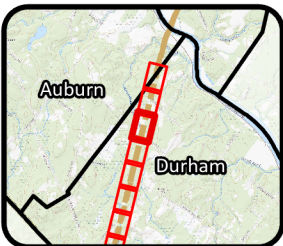
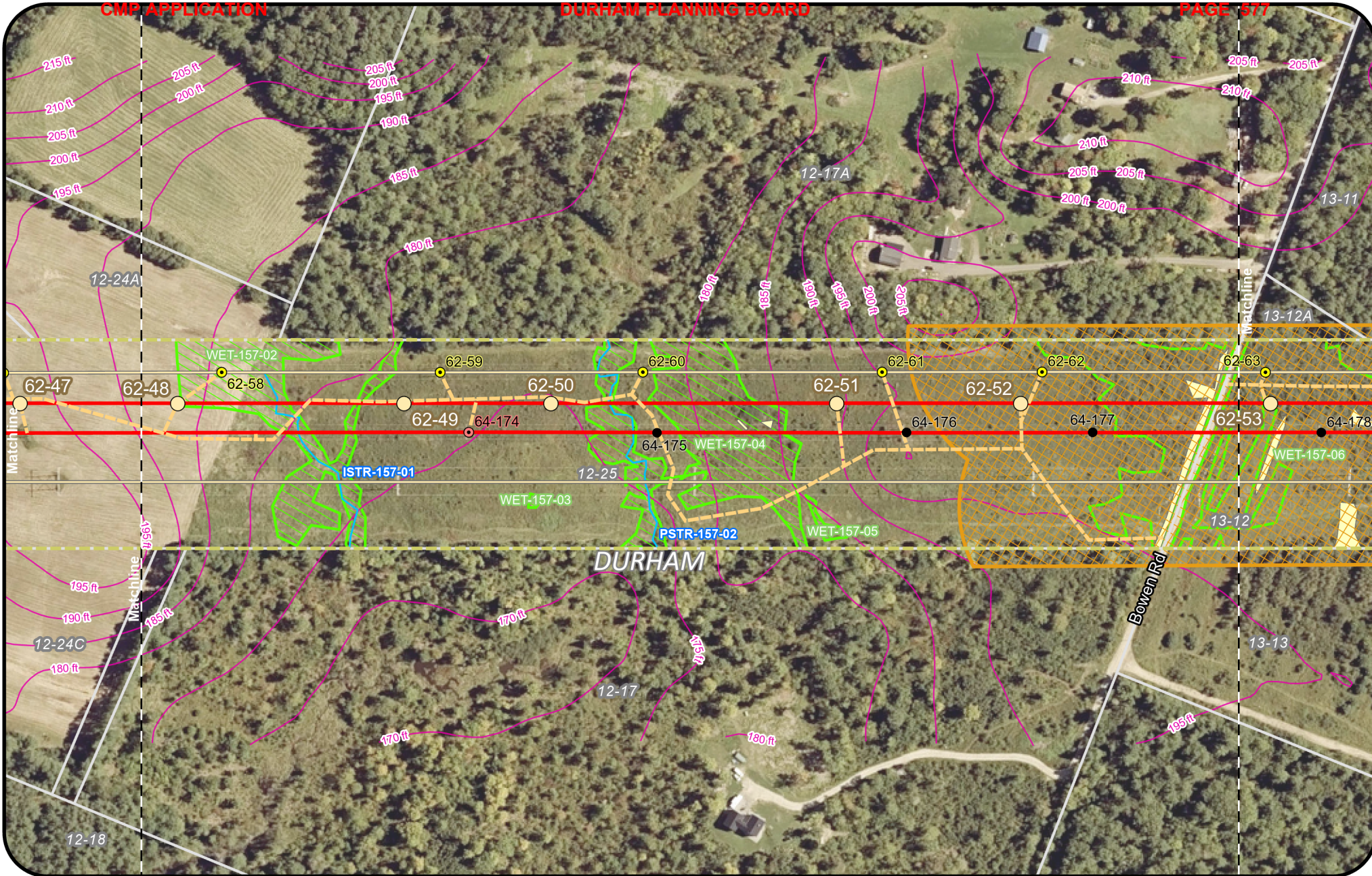
Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Maintenance Structure	R, T, and E Species	Use Agreement Parcel
Project Centerline	Demolition Pole	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Contour	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Stream	Deer Wintering Area	100-Year Floodway
Existing Access Road	Wetland		
	SVP/ PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application 250

Feet





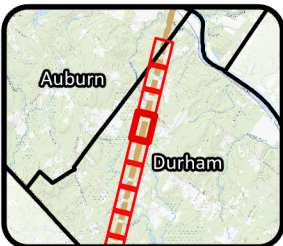
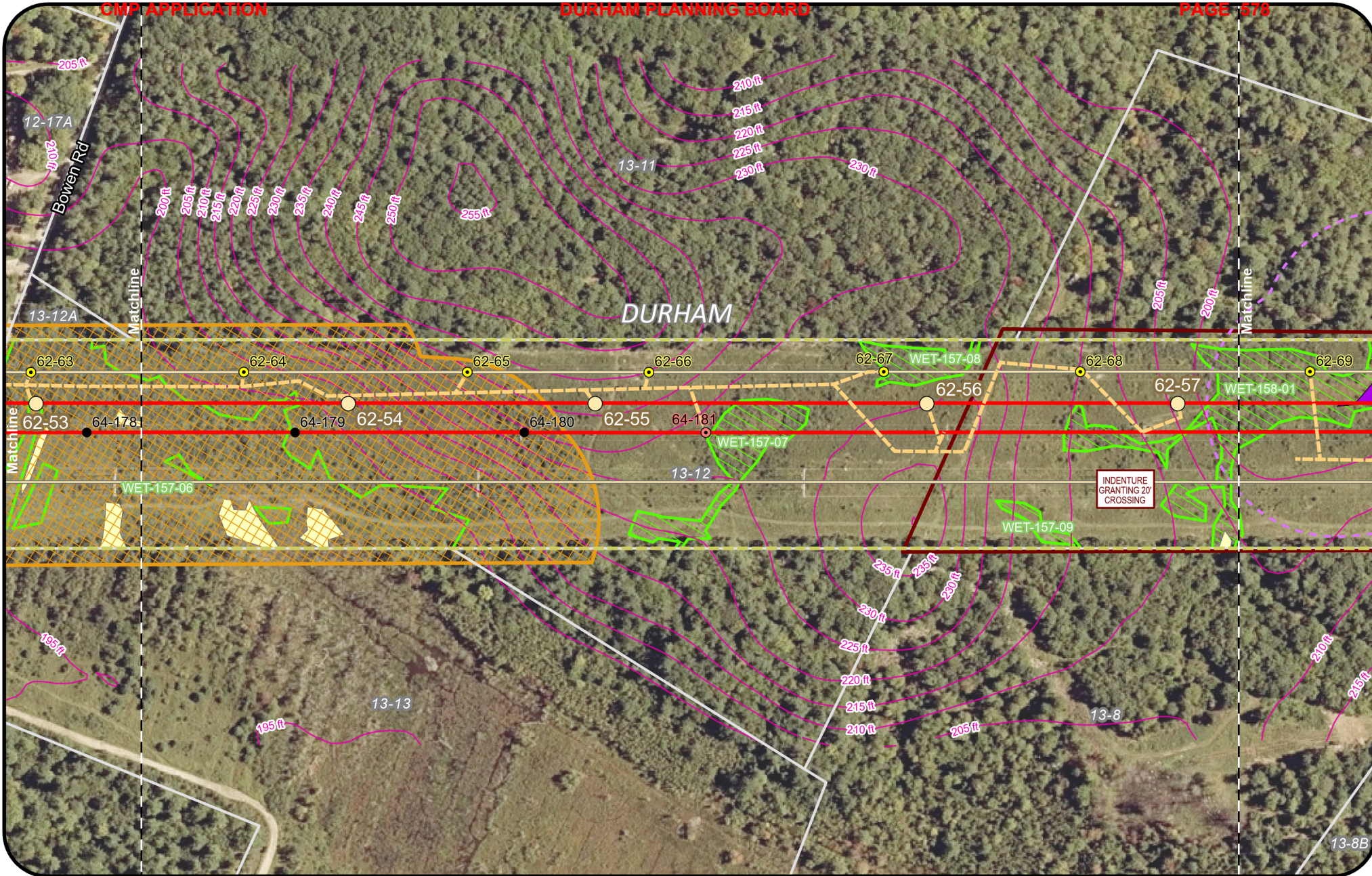
Legend

Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Maintenance Structure	R, T, and E Species	Use Agreement Parcel
Project Centerline	Demolition Pole	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Contour	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Stream	Deer Wintering Area	100-Year Floodway
Existing Access Road	Wetland		
	SVP/ PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application 250



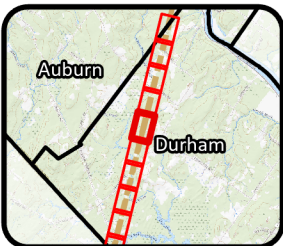
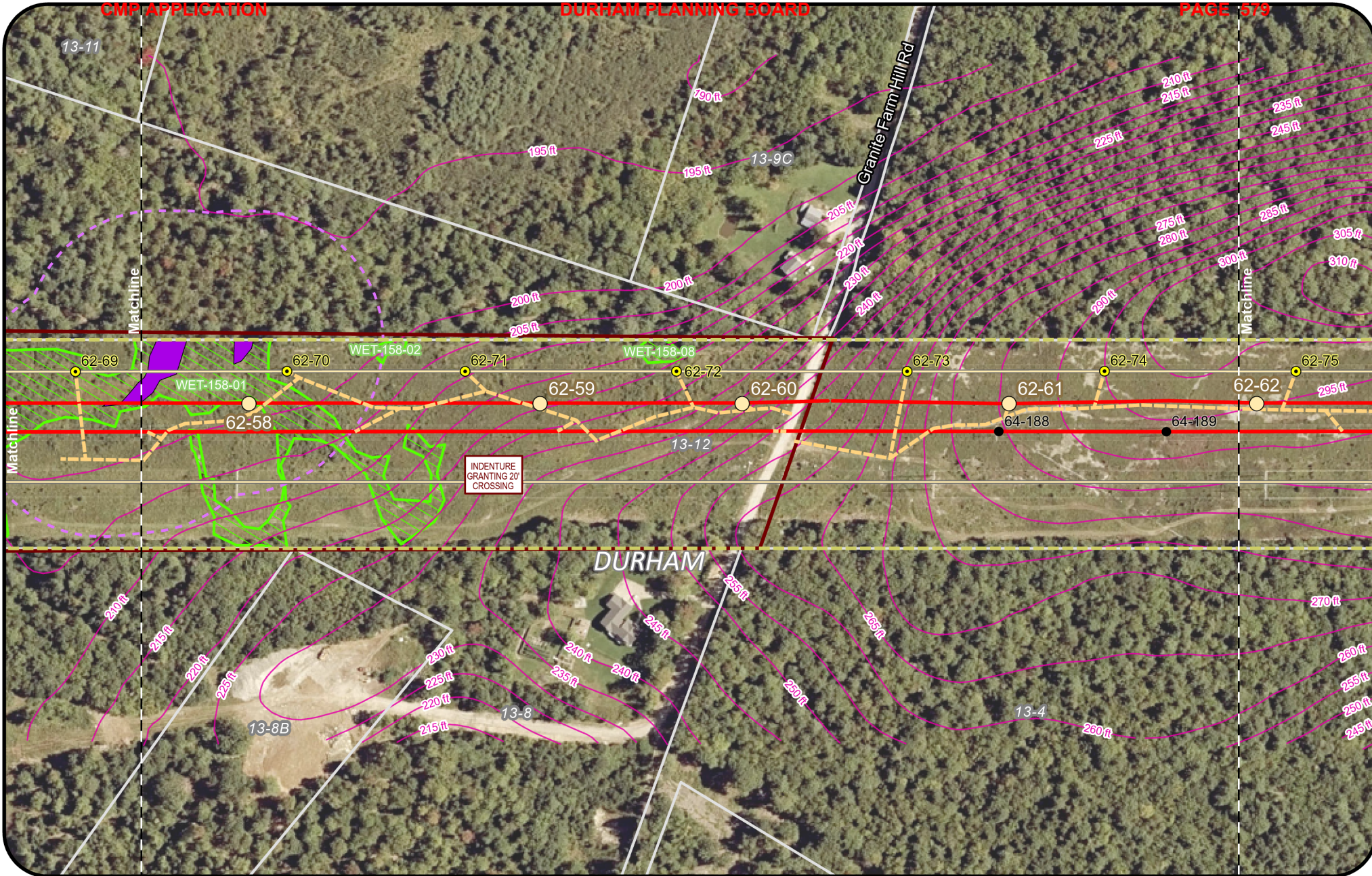


Legend

Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Maintenance Structure	R, T, and E Species	Use Agreement Parcel
Project Centerline	Demolition Pole	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Contour	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Stream	Deer Wintering Area	100-Year Floodway
Existing Access Road	Wetland		
	SVP/ PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)
 Town of Durham Application
 250 Feet





Legend

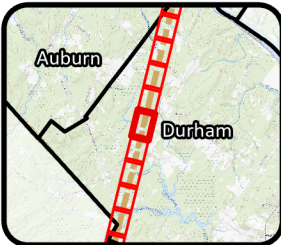
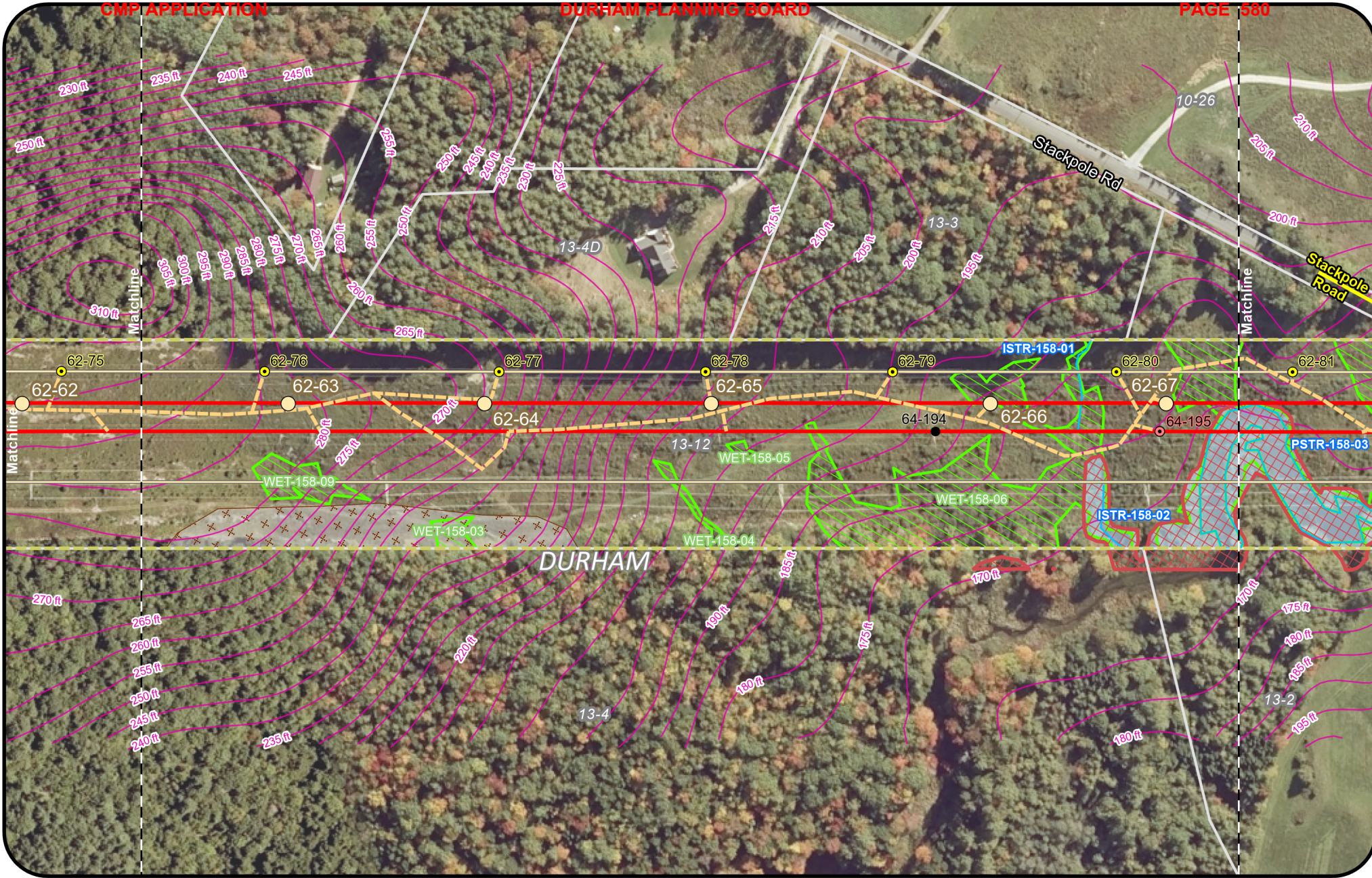
Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Demolition Pole	R, T, and E Species	Use Agreement Parcel
Project Centerline	Contour	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Stream	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Wetland	Deer Wintering Area	100-Year Floodway
Existing Access Road	SVP/ PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application
250

Feet

CENTRAL MAINE POWER

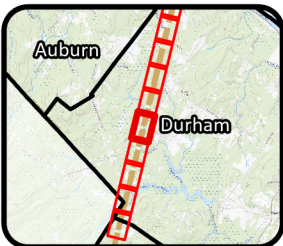
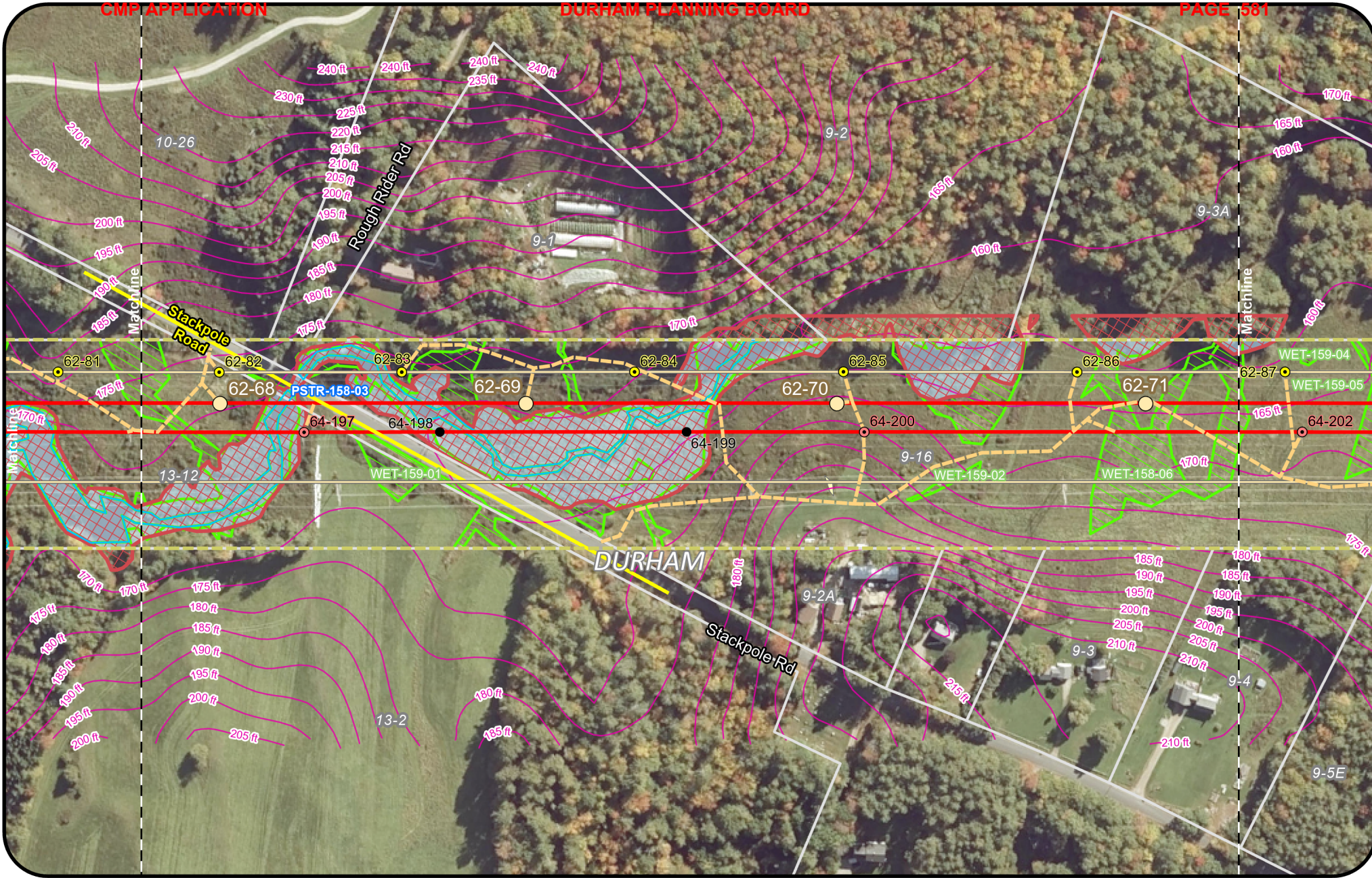


Legend

Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Maintenance Structure	R, T, and E Species	Use Agreement Parcel
Project Centerline	Demolition Pole	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Contour	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Stream	Deer Wintering Area	100-Year Floodway
Existing Access Road	Wetland		
	SVP/ PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)
 Town of Durham Application
 250
 Feet

CENTRAL MAINE POWER



Legend

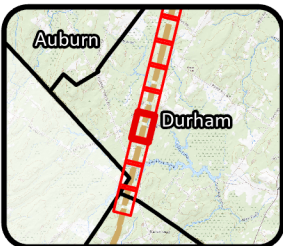
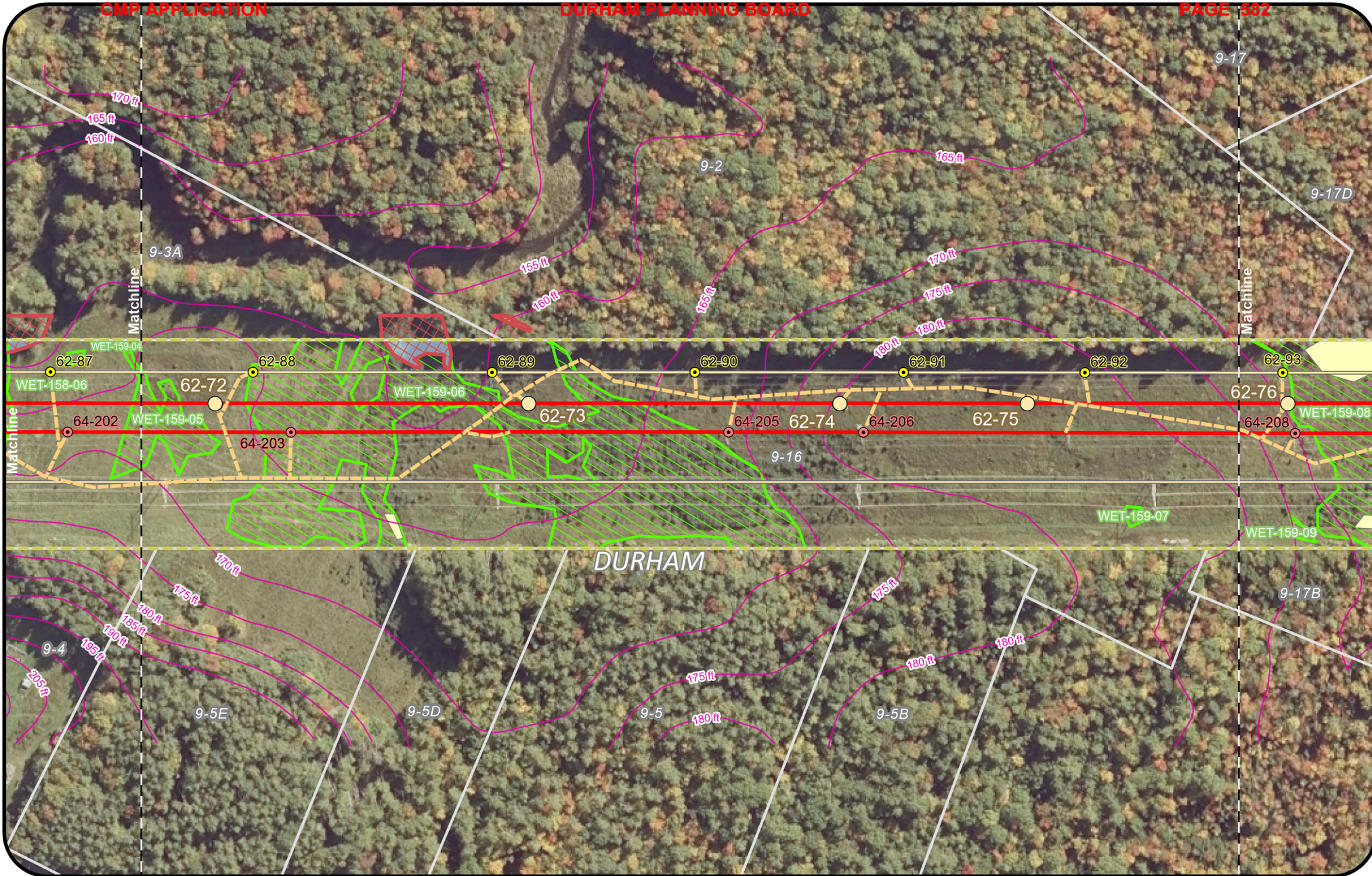
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CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Maintenance Structure	R, T, and E Species	Use Agreement Parcel
Project Centerline	Demolition Pole	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Contour	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Stream	Deer Wintering Area	100-Year Floodway
Existing Access Road	Wetland		
	SVP/PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application 250

Scale: _____ Feet





Legend

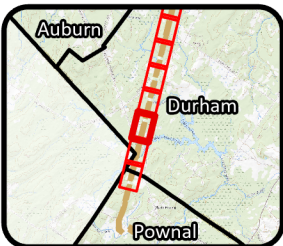
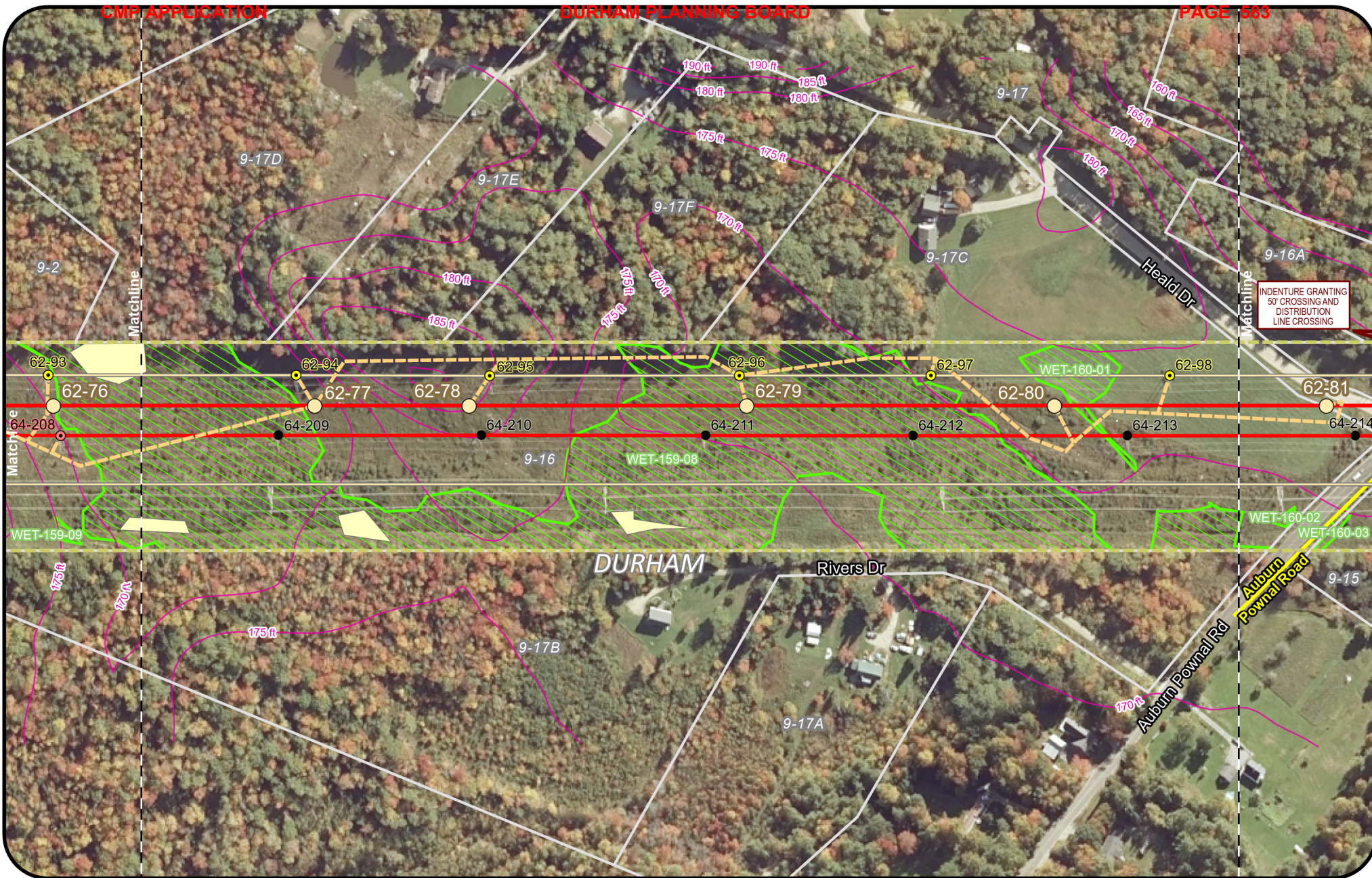
Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Maintenance Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Demolition Pole	R, T, and E Species	Use Agreement Parcel
Project Centerline	Contour	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Stream	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Wetland	Deer Wintering Area	100-Year Floodway
Existing Access Road	SVP/ PSVP		

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham
Application
250

Feet





Legend

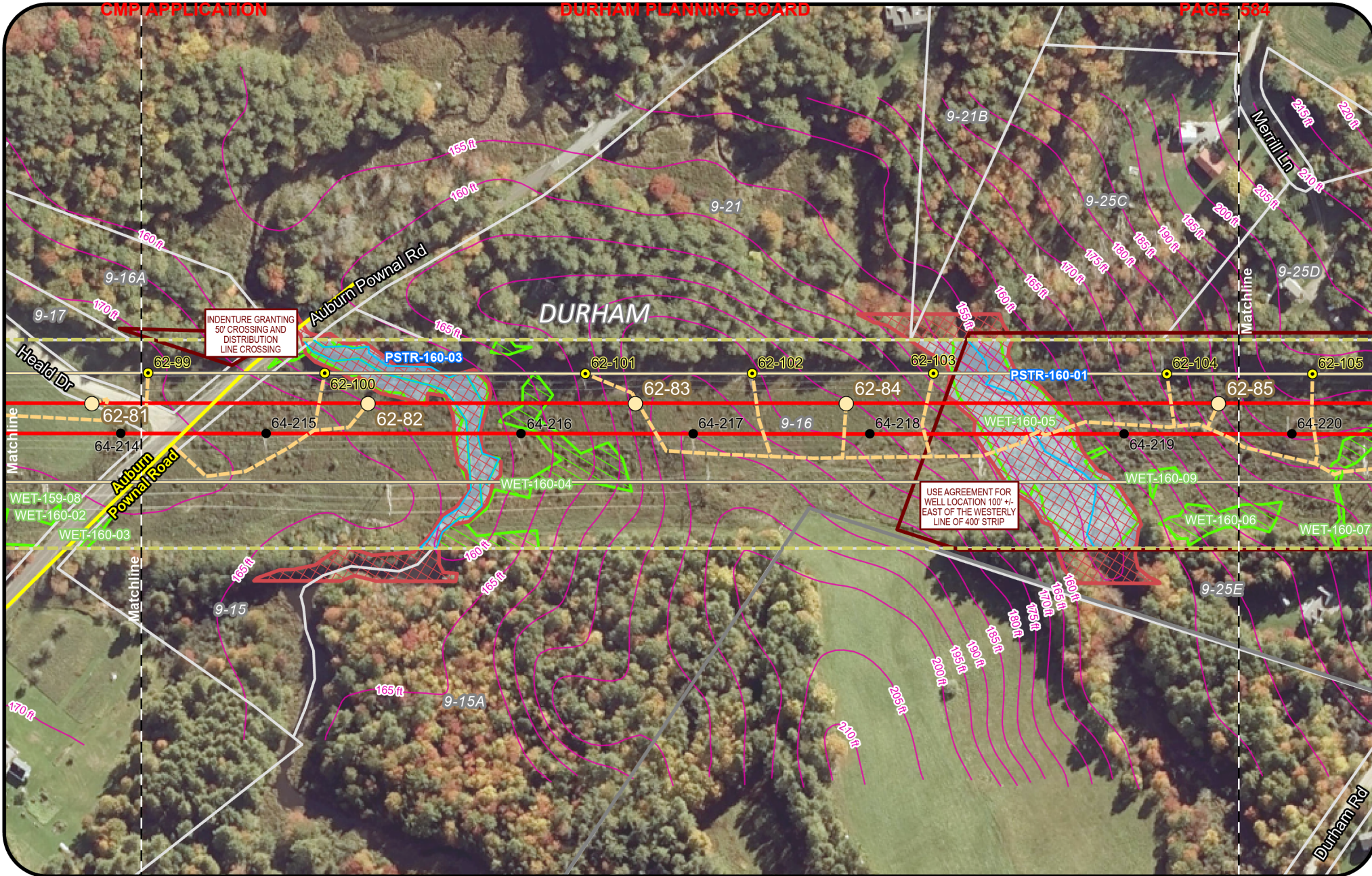
Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Maintenance Structure	R, T, and E Species	Use Agreement Parcel
Project Centerline	Demolition Pole	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Contour	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Stream	Wetland	100-Year Floodway
Existing Access Road	SVP/ PSVP	Deer Wintering Area	

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application 250

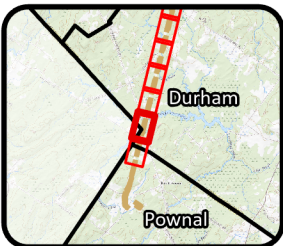
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INDENTURE GRANTING
50' CROSSING AND
DISTRIBUTION
LINE CROSSING

USE AGREEMENT FOR
WELL LOCATION 100' +/-
EAST OF THE WESTERLY
LINE OF 400' STRIP



Legend

Clearing Limits & Forested Area	Proposed Structure	USACE Vernal Pool	Limited Residential District
CMP Ownership	Existing Structure	SVP and PSVP Buffer (250')	Resource Protection District
Town Boundary	Demolition Pole	R, T, and E Species	Use Agreement Parcel
Project Centerline	Contour	Rare Plant (Point)	FEMA Flood Hazard Area
Existing Transmission Line	Stream	Inland Wading Bird & Waterfowl Habitat	100-Year Floodplain
Proposed Access Road	Wetland	Deer Wintering Area	100-Year Floodway
Existing Access Road	SVP/ PSVP		

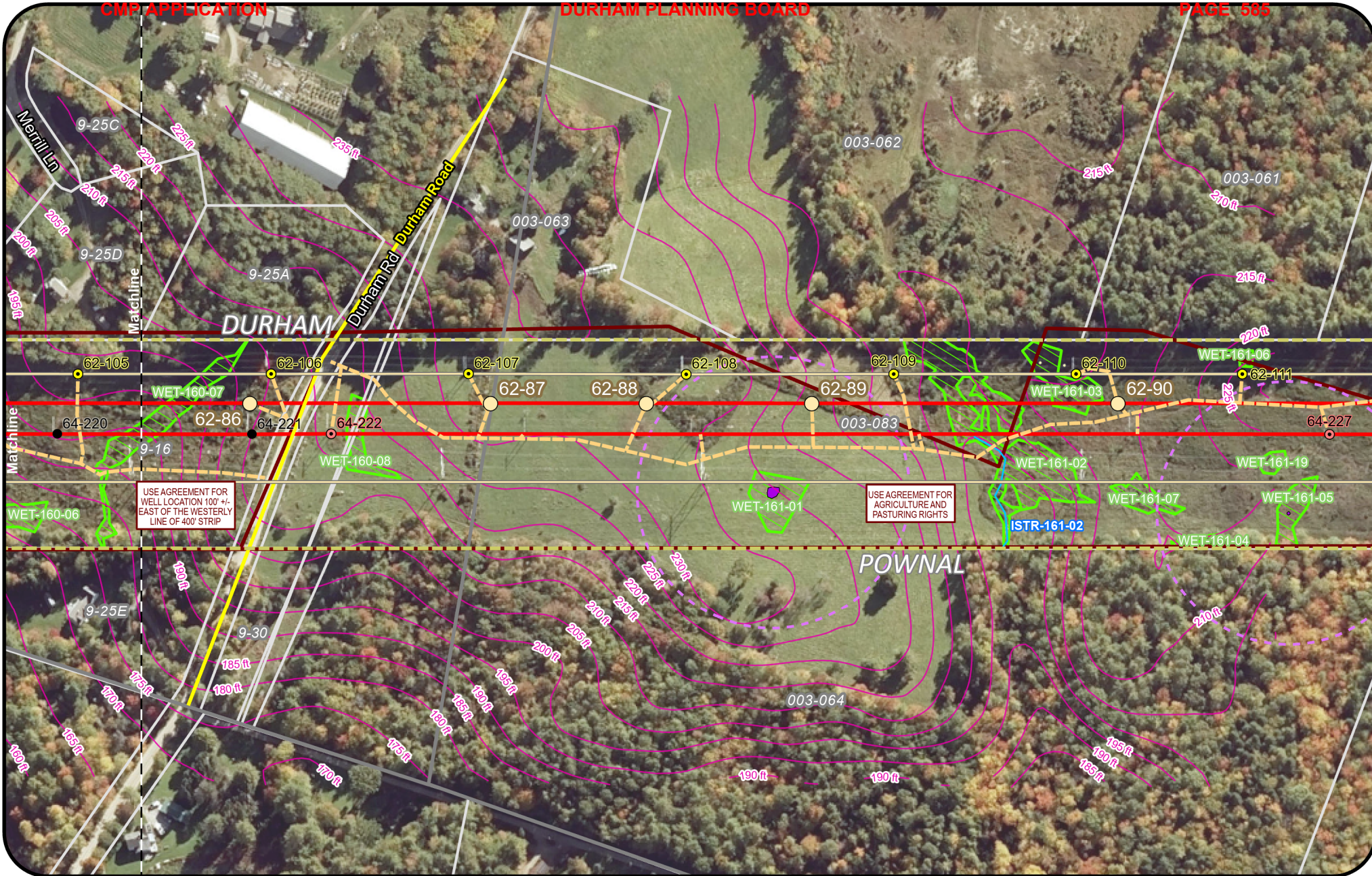
Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application 250

Scale: _____ Feet

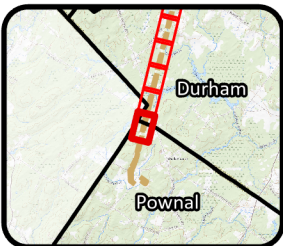
CENTRAL MAINE POWER

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USE AGREEMENT FOR WELL LOCATION 100' +/- EAST OF THE WESTERLY LINE OF 400' STRIP

USE AGREEMENT FOR AGRICULTURE AND PASTURING RIGHTS



- Legend**
- Clearing Limits & Forested Area
 - CMP Ownership
 - Town Boundary
 - Project Centerline
 - Existing Transmission Line
 - Proposed Access Road
 - Existing Access Road
 - Proposed Structure
 - Existing Structure
 - Maintenance Structure
 - Demolition Pole
 - Contour
 - Stream
 - Wetland
 - SVP/ PSVP
 - USACE Vernal Pool
 - SVP and PSVP Buffer (250')
 - R, T, and E Species
 - Rare Plant (Point)
 - Inland Wading Bird & Waterfowl Habitat
 - Deer Wintering Area
 - Limited Residential District
 - Resource Protection District
 - Use Agreement Parcel
 - FEMA Flood Hazard Area
 - 100-Year Floodplain
 - 100-Year Floodway

Sections 62 and 64 High Voltage Alternating Current Transmission Line Rebuilds (115kV)

Town of Durham Application 250

100-Year Floodplain
100-Year Floodway

Feet



EXHIBIT 5 TRANSMISSION LINE CONFIGURATION CROSS SECTIONS

NOTE:
1. UNDERGROUND FIBER OPTIC CABLE LOCATION VARIES ALONG R.O.W.
2. M&N UNDERGROUND HPNG PIPELINE LOCATION VARIES ALONG R.O.W.

SECTION 3026
345 kV

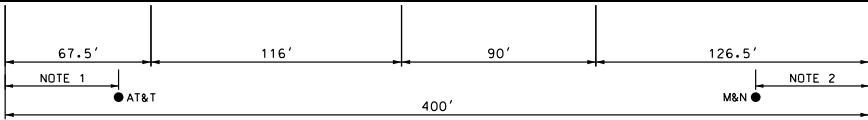
SECTION 62
115 kV

SECTION 64
115 kV

TYP A.G.
HT 45'

TYP A.G.
HT 45'

TYP A.G.
HT 95'



LIMIT
R.O.W.

LIMIT
R.O.W.

LOOKING FROM LARRABEE ROAD S/S TOWARDS SUROWIEC S/S
(APPROX. 5.7 MILES)

PERMITTED
(MDEP & USACE)

SECTION 3026
345 kV

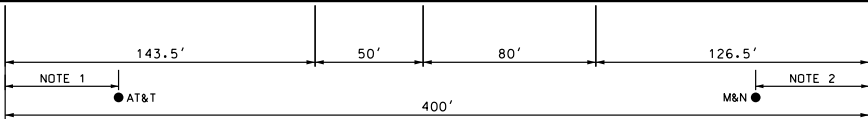
SECTION 62
115 kV

SECTION 64
115 kV

TYP A.G.
HT 80'

TYP A.G.
HT 80'

TYP A.G.
HT 95'



LIMIT
R.O.W.

LIMIT
R.O.W.

LOOKING FROM LARRABEE ROAD S/S TOWARDS SUROWIEC S/S
(APPROX. 5.7 MILES)

PROPOSED

SECTION 3026
345 kV

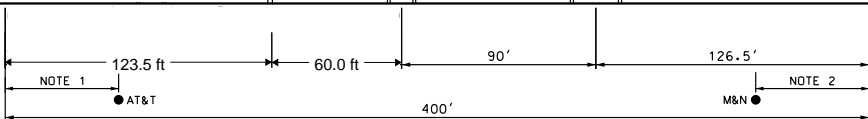
SECTION 62
115 kV

SECTION 64
115 kV

TYP A.G.
HT 80'

TYP A.G.
HT 45'

TYP A.G.
HT 95'



LIMIT
R.O.W.

LIMIT
R.O.W.

LOOKING FROM LARRABEE ROAD S/S TOWARDS SUROWIEC S/S
(APPROX. 5.7 MILES)

EXHIBIT 6 POST-CONSTRUCTION VEGETATION MAINTENANCE PLAN

**New England Clean Energy Connect
Post-Construction Vegetation Maintenance Plan**

Prepared by:

**Central Maine Power Company
83 Edison Drive
Augusta, Maine 04336**

Revised October 2020



Introduction

This post-construction Vegetation Maintenance Plan (VMP) describes the restrictive maintenance requirements for protected natural resources within Central Maine Power Company's (CMP) New England Clean Energy Connect (NECEC) project transmission line corridor. The requirements described in this VMP apply to routine maintenance and are not intended to apply to emergency maintenance and/or repair actions.

The goal of this VMP is to provide maintenance personnel and contractors with a cohesive set of vegetation maintenance specifications for transmission line corridor. This VMP is intended to be used in conjunction with project As-Built Plan & Profile drawings to locate the areas where maintenance restrictions apply.

The protected natural resources and visually sensitive areas subject to restrictive and protective maintenance requirements include:

- Wetlands and streams (intermittent and perennial);
- Perennial streams within Segment 1 of the NECEC project;
- All streams (intermittent and perennial) within the Atlantic salmon Gulf of Maine Distinct Population Segment (GOM DPS), which includes the critical habitat;
- Outstanding river segments, rivers, streams or brooks containing threatened or endangered species (e.g., Atlantic salmon);
- Gold Brook and Mountain Brook containing State Threatened Roaring Brook Mayfly (*Epeorus frisoni*) and/or State Special Concern Northern Spring Salamander (*Gyrinophilus porphyriticus*) species;
- State Special Concern Species Habitat: Rusty Blackbird (*Euphagus carolinus*) and Wood Turtle (*Glyptemys insculpta*);
- Significant Vernal Pools (SVP);
- Inland Waterfowl and Wading Bird Habitat (IWWH);
- Deer Wintering Areas (DWA);
- Potential maternal roosting areas for Northern Long-eared Bat (*Myotis septentrionalis*);
- Rare plant locations;
- Locations over mapped significant sand and gravel aquifers; and
- Viewpoints from Coburn Mountain and Rock Pond.

In locations where individual restrictions or procedures overlap or multiple restrictions apply, the more stringent restrictions and all applicable procedures will be followed by maintenance personnel and contractors.

1.0 Right-of-Way Vegetation Maintenance Procedures

1.1 Typical Maintenance Procedures

Routine vegetation maintenance for transmission line corridors (Figure 1) is intended to meet the following goals:

1. Maintain the integrity and functionality of the line;
2. Facilitate safe operation of the line;
3. Maintain access in case of emergency repairs; and
4. Facilitate safety inspections.

Therefore, the objectives of this VMP will be to control the growth of woody vegetation capable of encroaching into the conductor safety zone of the transmission line to ensure the integrity and safe operation of the transmission line consistent with the standards of North American Electric Reliability Corporation's (NERC) Transmission Vegetation Management.¹ This will be accomplished by practicing an integrated vegetation management strategy using a combination of hand-cutting and selective herbicide applications.² Mechanical mowing may be used in unusual circumstances to regain control of vegetation, should the typical procedures not suffice.

Throughout clearing and construction, shrub and herbaceous vegetation will remain in place to the extent possible. Removing capable vegetation will be done during initial transmission line corridor clearing prior to construction of the new transmission line. Follow-up maintenance activities during operation of the line require the removal of capable species, dead trees, and hazard trees. Capable trees are those plant species and individual specimens that are capable of growing tall enough to violate the required clearance between the conductors and vegetation established by NERC. Due to the sag of the electric transmission lines between the poles, which varies with the distance between poles, topography, tension on the wire, electrical load, air temperature, and other variables, the required clearance is typically achieved by removing all capable species during each maintenance cycle. Removing capable species vegetation allows for the maintenance of 25 feet of separation between vegetation and the lines, thereby adhering to NERC standards. Hazard trees are those trees typically on the edge of the transmission line corridor that pose an imminent threat to violating the minimum separation standard (minimum distance allowed between conductors and adjacent vegetation varies depending on voltage) or are

¹ North American Electric Reliability Corporation Transmission Vegetation Management, Standard FAC 003 – 3 Technical Reference, July 1, 2014.

² No herbicide will be applied in the Segment 1 corridor, within 100 feet of the one observed small whorled pogonia occurrence in the Town of Greene, or within 100 feet of the 174-acre Casavant tract on the east and west sides of the transmission line corridor in this vicinity in Greene.

at risk of contacting the lines themselves. Hazard trees are typically removed immediately upon identification.

More frequent vegetation management may be required within the first 3 to 4 years following construction in order to bring the vegetation under control. After this initial management period, maintenance practices are typically carried out on a 4-year cycle depending on growth, weather, geographic location, and corridor width. Maintenance may be required less frequently in the long-term as vegetation within the corridor becomes dominated by shrub and herbaceous species. Large branches that overhang the transmission line corridor and any hazard trees on the edge of, or outside of, the transmission line corridor that could contact the electrical lines or come within 15 feet of a conductor may be removed as soon as they are identified.

The following procedures will be implemented during vegetation maintenance activities to protect sensitive natural resources:

- Protected resources and their associated buffers will be flagged or located with a Global Positioning System (GPS) prior to all maintenance operations;
- Hand-cutting will be the preferred method of vegetation maintenance within buffers and sensitive areas, where reasonable and practicable;
- Equipment access through wetlands or over streams will be avoided as much as practicable by utilizing existing public or private access roads, with landowner approval where required;
- Equipment access in upland areas with saturated soils will be minimized to the extent practicable to avoid rutting or other ground disturbance;
- Significant damage to wetland or stream bank vegetation, if any, will be repaired following completion of maintenance activities in the area; and
- Areas of significant soil disturbance will be stabilized and reseeded following completion of maintenance activity in the area.

2.0 Vegetation Management – Segment 1 Specific

This section describes the four (4) 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; or
- Tapered vegetation.

The May 11, 2020 Order (Order) of the Maine Department of Environmental Protection (MDEP) prescribed the locations, referred to as Wildlife Areas (see Table 1), where full canopy height vegetation, 35-foot minimum vegetation height, or vegetation managed for deer travel (25

to 35-foot-softwood species) must be retained or maintained. Tapered vegetation is required in the remainder of Segment 1. Requirements associated with riparian filter areas, including those that are specific to Segment 1, are described in Section 5.0.

The NECEC Natural Resource Maps incorporate and depict the vegetation clearing and management practices as required by the MDEP Order. On the maps, the transmission line centerline varies its color according to what vegetation management practice is required.

2.1 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 1, include the Gold Brook crossing (a portion of 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 install and maintain 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.

2.2 35-Foot Minimum Vegetation Height

In areas where minimum 35-foot tall vegetation must be maintained (see Table 1), only areas necessary to access pole locations or install and maintain 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 area without prior approval from MDEP.

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 cut at ground level and will only be removed if leaving them in place would violate the Maine Slash Law or create a fire or safety hazard.

2.3 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, identified in Table 1 as Wildlife Area 12, will extend along the corridor, under the conductors, where conductor height allows for taller vegetation within the corridor. These deer travel corridors must be designated and labeled corridors 1 through 8, managed as softwood stands, and must allow for the maximum tree height that can practically be maintained without encroaching into the conductor safety zone (approximately 24 feet of clearance between the lowest conductor at maximum sag conditions and the top of vegetation) or into the necessary cleared area adjacent to each structure. Tree heights will vary based on structure height, conductor sag, and topography, but must generally range from 25 to 35 feet.

Within the eight designated deer travel corridors, 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 1 Wildlife Areas¹

Area Name	From Coordinates (lat, long)	To Coordinates (lat, long)	Location	Min. Veg Height	Notes	Approximate Length (miles)²	Natural Resource Map No.
Wildlife Area 1	45.49628364, -70.65389705	45.49561741, -70.64935131	Beattie Twp	35'	Includes Number One Brook not visible from Beattie Pond	0.22	8, 9
Wildlife Area 2	45.46431117, -70.56925893	45.46291336, -70.54484557	Skinner Twp	35'	Includes crossing of the South Branch of the Moose River (all of TNC 2)	1.19	20, 21, 22, 23
Wildlife Area 3	45.46350041, -70.51607006	45.46481614, -70.49109824	Skinner Twp Appleton Twp	35'	Includes five perennial streams and four intermittent streams	1.25	26, 27, 28
Wildlife Area 4	45.46615984, -70.45270383	45.46311974 -70.40751264	Appleton Twp	35' (except full canopy height at Gold Brook crossing)	Includes Gold Brook crossing (structures 432-746 to 432-741) and Roaring Brook 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	33, 34, 35, 36, 37, 38
Wildlife Area 5	45.47206202, -70.33192742	45.49411339, -70.24441057	Hobbestown 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	4.87	46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57

Area Name	From Coordinates (lat, long)	To Coordinates (lat, long)	Location	Min. Veg Height	Notes	Approximate Length (miles) ²	Natural Resource Map No.
					topography may allow crossing without taller poles (structures 432-717 to 432-716)		
Wildlife Area 6	45.47472852, -70.10099603	45.46991721, -70.10534506	Johnson Mtn Twp	Full canopy height	Mountain Brook crossing, includes Roaring Brook Mayfly habitat	0.38	76, 77
Wildlife Area 7	45.43511224, -70.03821586	45.43757616, -70.03451059	Johnson Mtn Twp	35'	Cold Stream crossing; adjacent to Cold Stream Forest Tract	0.23	91
Wildlife Area 8	45.44260293, -70.00541135	45.44315901, -70.00109742	Johnson Mtn Twp	35'	Unnamed stream crossing where 35-foot vegetation likely can be maintained without taller poles	0.21	95
Wildlife Area 9	45.41967147, -69.98245727	45.39922953, -69.94817359	West Forks	35'	Includes Tomhegan Stream crossing and adjacent to Cold Stream Forest Tract	2.21	100, 101, 102, 103, 104, 105
Wildlife Area 10	45.362187, -69.913515	45.359305, -69.912368	Moxie Gore	35'		0.19	113
Wildlife Area 11	45.37492343, -69.94696772	45.37102781, -69.93728547	West Forks Moxie Gore	Full canopy height	Upper Kennebec River crossing, Eastern edge of the clearing for the HDD Termination Station in West Forks to the western edge of the clearing for the HDD Termination Station in Moxie Gore	0.56	108, 109

Area Name	From Coordinates (lat, long)	To Coordinates (lat, long)	Location	Min. Veg Height	Notes	Approximate Length (miles) ²	Natural Resource Map No.
Wildlife Area 12	45.37065356, -69.93010848	45.37040077 -69.92526549	Moxie Gore	25'-35'	Vegetation managed for deer travel in Upper Kennebec River DWA	0.23	110, 111
	45.36623618, -69.91512820	45.36373432 -69.91413169	Moxie Gore	25'-35'	Vegetation managed for deer travel in Upper Kennebec River DWA	0.18	112
	45.36277778, 69.91361111	45.362187, -69.913515	Moxie Gore	25'-35'	Vegetation managed for deer travel in Upper Kennebec River DWA.	0.09	112, 113
	45.359305, -69.912368	45.3591667, -69.91138889	Moxie Gore	25'-35'	Vegetation managed for deer travel in Upper Kennebec River DWA.	0.1	113

¹: References to structure numbers have been updated to Lat/Long Coordinates, rather than structure numbers, to maintain consistency with the areas defined by the MDEP permit.

²: Total distance along the Segment 1 corridor with taller vegetation is approximately 14.08 miles.

2.4 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 the eight deer travel corridors. Within this wildlife area, tapering is required along the transmission line corridor in the sections outside the deer travel corridors.

“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 (see Figure 2).

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 only non-capable species are allowed to grow (capable species includes woody species and specimens capable of growing tall enough to reach 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.

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. To minimize the environmental impact of the corridor to the greatest extent practicable, including reasonable efforts to avoid the growth of even-aged stands within each taper, vegetation in the tapered corridor will be managed as follows.

The first taper includes the areas within 16 feet of each side of the wire zone, within which vegetation up to 15 feet tall, including capable species, will be maintained. As vegetation maintenance proceeds through the first several cycles, the 15-foot tall tapered “tier” will become dominated by shrubs, because many shrubs exceed ten feet in height.

The second tapered tier includes the next 16 feet on each side of the corridor, within which taller vegetation up to 25 feet tall will be maintained. The 25-foot tall tier will be dominated by tree

species, with a smaller shrub component. Following initial vegetation clearing in these zones, there will be variation in species composition similar to the composition prior to construction clearing, but without the taller individuals. In deciduous and mixed-deciduous stands, the early maintenance cycles will favor establishment of fast-growing deciduous species because not treating them with herbicides will allow rapid regrowth primarily from coppicing (growth of shoots from cut stumps). In addition, increased sunlight will allow regeneration from seed, with the species composition of seedling establishment varying with the amount of soil moisture and mineral soil exposure.

The third and final tapered tier includes the outer 16 feet on each side of the corridor, within which taller vegetation up to 35 feet tall will be maintained. Similar to the 25-foot zones, the 35-foot vegetation zones will be dominated by tree species, with a smaller shrub component. Most of the above description for the 25-foot height zone applies to 35-foot height zone with a few differences. First, retention of taller individuals will maintain stand compositions more closely matching the original stand for longer throughout the early maintenance cycles because fewer individual trees will be removed. This will inhibit coppicing of deciduous trees, benefitting coniferous individuals in the stand. Second, removing fewer individual trees, and placement of the 35-foot zone alongside the 25-foot zone will result in less sunlight, so there will be less release from suppression as was described above and slower overall growth of the stands in the 35-foot height zone. This higher shade component will also favor regeneration and release of more shade-tolerant coniferous species, primarily spruce and fir. Third, the 35-foot height zone will be more strongly influenced by the forest management that occurs immediately adjacent to the project right-of-way, which is beyond the control of CMP. For example, if adjacent areas are cut more heavily, increased sun exposure will have effects more like those described above for the 25-foot height zone, i.e., faster understory release and greater seedling establishment.

Trees within each 16-foot wide tier will be selectively cut in a manner that retains those trees that do not exceed their respective tier's designated height. However, in order to ensure that no trees intrude into the conductor safety zone, any trees anticipated to exceed their respective tier's designated height prior to the next scheduled maintenance cycle will be cut at ground level.

As vegetation is maintained within a tapered corridor, any trees that exceed the designated height for the taper they are within, or are anticipated to exceed the height before the next scheduled maintenance cycle, will be 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 without prior approval from the Department. Any trees that are cut will only be removed if leaving them in place would violate 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-feet
- 2nd taper: 25-feet
- 3rd taper: 35-feet

Access roads and structure preparation and installation areas cleared of all capable and non-capable species will be 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 be maintained as vegetated following construction of the Project.

3.0 Vegetation Maintenance Methods – All Transmission Line Corridor Areas

3.1 Mechanical Methods

During routine vegetation maintenance after construction, mechanical methods of maintaining the height of vegetation on the transmission line corridor will consist primarily of cutting with hand tools, with occasional use of chainsaws and limited use of motorized equipment in areas directly accessible from public or private access roads.

Maintenance procedures will be to cut all capable species and any dead or hazard trees at ground level except in designated areas, as described below. Large vegetation cut during routine maintenance will be handled in accordance with the Maine Slash Law.³ 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.

Additionally, as a conservation effort to protect the Northern Long-eared Bat, CMP will suspend vegetation maintenance activities for trees greater than 3 inches diameter at breast height during the maternity roost season of June 1 to July 31.

3.2 Herbicide Application

With the exception of the Segment 1 portion of the Project, and within the full width and length of the corridor containing transmission line structures 432-23 to 432-29.1,⁴ herbicide application

³ 12 M.R.S. §§ 9331 et seq.

⁴ No herbicide will be applied within 100 feet of the one observed small whorled pogonia occurrence in the Town of Greene, or

will be used in conjunction with mechanical methods of vegetation maintenance. The herbicide application program is consistent with most New England utilities and consists of direct application to targeted species and specimens along the transmission line corridor with a low-volume foliar herbicide or application of herbicides to cut stumps and surfaces of larger trees. Direct application to individual plant species, as opposed to a broadcast spray, will target woody vegetation allowing low-growing plant communities (the desired shrub and herbaceous species) to thrive. Herbicides will also be selectively applied to minimize the impacts to non-target species. Aerial application will not be done. Only herbicides which are registered with and approved by the U.S. Environmental Protection Agency (EPA-approved) and registered with the Maine Board of Pesticides Control (BPC) will be used.

Herbicide applications will likely begin the first year after construction is completed to gain control of vegetation growth (with the exception of areas listed below where no herbicides will be applied). When control is achieved, treatment will typically occur on a 4-year cycle or as needed. By using selective herbicides and a variety of application methods, vegetation along the transmission line corridor will eventually consist of a dense, low-growing plant community that will discourage the establishment of tree species. Therefore, fewer woody species will require treatment in future applications.

The following procedures and restrictions will be implemented during herbicide applications:

- No herbicides will be used in Segment 1 of the Project.
- No herbicides will be used within the full width and length of the transmission line corridor adjacent to the 174-acre parcel near Allen Pond in Greene, i.e., the portion of the corridor containing transmission line structures 432-23 to 432-29.1.
- Herbicides will be used in strict accordance with the manufacturer's EPA-approved labeling and will not be applied directly to waterbodies or areas where surface water is present.
- Throughout the Project corridor no foliar herbicides will be applied within a 100-foot buffer of all coldwater fishery⁵ streams, or within a 75-foot buffer of intermittent streams.
- In co-located sections outside the GOM DPS, foliar herbicides will not be applied within 75 feet of rivers, streams, brooks, lakes, ponds, or within 25 feet of wetlands that have water present at the surface at the time of the application.
- For all streams within the GOM DPS which includes the critical habitat, streams and rivers classified as a coldwater fishery, and outstanding river segment or

within 100 feet of the 174-acre Casavant tracts on the east and west sides of the transmission line corridor in this vicinity in Greene.

⁵ The term coldwater fishery, as used in this document, pertains to streams that are known to contain brook trout as designated by the Maine Department of Inland Fisheries and Wildlife (MDIFW).

streams containing threatened or endangered species (e.g., Atlantic salmon), foliar herbicides will not be applied within a 100-foot buffer. This requirement extends to all streams within the Project transmission line corridor, regardless of classification, located immediately west of Moxie Pond;

- Herbicides will not be mixed, transferred or stored within 100 feet of any wetland or surface water, unless done so on a public access road;
- Herbicides will not be mixed, transferred or stored within 100 feet of Significant Vernal Pool depressions, unless done so on a public access road;
- Herbicides will not be mixed, transferred or stored over mapped significant sand and gravel aquifers unless done so on a public access road;
- Herbicides will not be applied, mixed, transferred or stored within 100 feet of any known private well or spring or within 200 feet of any known public water supply well, unless done so on a public access road;
- When herbicide applications are performed in wetlands without standing water, only herbicides approved for use in wetland environments will be used;
- Herbicides will not be applied to any area when it is raining or when wind speed exceeds 15 miles per hour as measured on-site at the time of application. When wind speeds are below 3 miles per hour, applicators should be aware of whether a temperature inversion is present, and should consult the herbicide label to determine whether application should proceed under these conditions;
- The foreman or licensed applicator on each herbicide application crew will be licensed by the Maine BPC and will remain in eye contact and within earshot of all persons on his/her crew applying herbicides. At least one individual from any company applying herbicides must also hold a Commercial Master Applicator License issued by the BPC. This Master Applicator must have the ability to be on-site to assist persons applying herbicides within six hours driving time. If an out-of-state company is conducting the herbicide application, the company must have a Master Applicator in Maine during any application. Application of herbicides will be in accordance with applicable regulations promulgated under the Maine Pesticides Control Act, including those regulations to minimize drift, to maintain setbacks from sensitive areas during application, and to maintain setbacks from surface waters during the storing/mixing/loading of herbicides; and
- Herbicides will typically be mixed in a truck-mounted tank that remains on public access roads. Herbicide application is done by personnel with low-volume, hand-pressurized (manual) backpacks with appropriate nozzles, to minimize drift, who travel along the transmission line corridor by foot or by all-terrain vehicle and spot-treat target species and specimens.

The location of all streams, wetlands, significant vernal pools, rare plant locations, known wells, and mapped significant sand and gravel aquifers crossed by the transmission line corridor will be shown on the As-Built Plan & Profile drawings. GIS shapefiles will also be maintained with the location of these resources and will be provided to maintenance personnel. The presence of surface

water will be determined prior to herbicide use in any wetland or waterbody. Crew leaders will assure that resources and buffers are clearly marked in the field, or that locations of resources and buffers are provided as GIS/GPS data prior to initiation of an herbicide application for clear identification by the applicators.

3.3. Petroleum Products & Hazardous Materials Management

Any petroleum products or other hazardous material within the transmission line corridor during construction will be managed in accordance with CMP's Environmental Control Requirements for Contractors and Subcontractors – Oil and Hazardous Material Contingency Plan (see Exhibit 15-1 of the NECEC Site Law Application) and will include the following setbacks unless CMP can demonstrate that, due to special circumstances at specified locations, these setbacks are impractical at those locations.

- (a) No fuel storage, vehicle/equipment parking and maintenance, and refueling activity may occur within 100 feet of a protected wetland or other waterbody, unless no practicable alternative exists and secondary containment with 110% capacity is provided for any fuel storage containers or tanks, or if it occurs on a paved road.
- (b) No fuel storage, vehicle/equipment parking and maintenance, and refueling activity may occur within 200 feet of a known private water supply.
- (c) No fuel storage, vehicle/equipment parking and maintenance, and refueling activity may occur within 400 feet of a known public water supply.
- (d) No fuel storage, vehicle/equipment parking and maintenance and refueling activity may occur within 25 feet minimum of the following:
 - (i) An area listed in Maine's biological conservation data system, Biotics, of the Maine Natural Areas Program of the Department of Agriculture, Conservation and Forestry (MNAP), including rare natural communities and ecosystems (state rarity rank of S1 through S3 and habitats supporting Endangered or Threatened plant species). Boundaries and locations are as determined by MNAP.
 - (ii) Habitat of any species declared rare, threatened or endangered by MDIFW, Maine Department of Marine Resources, or the Director of the U.S. Fish and Wildlife Service.

4.0 Vegetation Maintenance within Freshwater Wetlands

Transmission line corridor wetlands range in type from small, emergent wetlands formed in ruts from logging equipment to large forested wetland systems. No specific buffers are proposed for the wetlands identified within the transmission line corridor.

4.1 Additional Vegetation Maintenance Restrictions within and Adjacent to Freshwater Wetlands

Vegetation maintenance within, and within 25 feet of, freshwater wetlands with standing water will be conducted only by hand cutting with hand tools or chainsaws. Herbicide use is permitted in wetlands only when no standing water is present in the wetland at the time of the application. Herbicides will not be stored, mixed, transferred between containers, and no refueling of chain saws or other equipment will be allowed, within 100 feet of freshwater wetlands, unless done so on a public access road.

5.0 Vegetation Maintenance within Stream Buffers (Riparian Filter Areas)

A 75-foot buffer, as measured from the top of each stream bank, will be established for vegetation maintenance along perennial and intermittent streams not designated as coldwater fisheries, within the transmission line corridor. Additional restrictions will be applied within 100 feet of streams meeting certain criteria, as described below. Special restrictions will apply within these stream buffers during vegetation maintenance.

This section describes the additional restrictions related to vegetation cutting and maintenance within these stream buffers. All vegetation maintenance procedures and restrictions that apply to typical transmission line corridor maintenance also apply within stream buffers.

5.1 Additional Vegetation Maintenance Restrictions within Stream Buffers

The following additional restrictions apply to vegetation clearing within stream buffers:

- a. Unless more restrictive requirements apply⁶, riparian natural buffers (or “stream” buffers) will be retained within 100 feet of all streams (intermittent and perennial) in the GOM DPS, all perennial and coldwater fishery streams within Segment 1 of the Project and all coldwater fisheries in other segments, outstanding river segments, or rivers, streams, or brooks containing Threatened or Endangered species (e.g., Atlantic salmon) unless the Department determines that the functions and values of the stream buffer will not be impacted by the removal of vegetation and approves an alternative minimum buffer.
- b. In the area adjacent to Moxie Pond in Segment 2, CMP will 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.
- c. For streams in areas where the new transmission line will be co-located within existing rights-of-way, CMP proposes to maintain a 75-foot buffer, unless meeting any of the above criteria, since the existing corridor is currently being maintained in an early successional state according to the guidelines set forth in

⁶ More restrictive requirements include, but are not limited to, requirements to maintain taller vegetation within the corridor such as provided for in Section 2, Table 1.

CMP's Vegetation Management Plan (Exhibit D), and the effect of the additional clearing (typically less than 75 feet) to accommodate the new line has been minimized.

- d. The boundary of each stream buffer will have unique flagging installed to distinguish between the applicable 75-foot or 100-foot stream buffer prior to clearing. Flagging will be maintained throughout construction.
- e. Foliar herbicides will be prohibited within the stream buffer, and all refueling/maintenance of equipment will be excluded from the buffer unless it occurs on an existing paved road or if secondary containment is used with oversight from an environmental inspector.
- f. 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.
- g. 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 stream buffer. CMP will not place any transmission line structures within the stream buffer, unless specifically authorized by the MDEP and accompanied by a site-specific erosion control plan. No structures will be placed within 25 feet of any stream regardless of its classification.
- h. Within that portion of the stream buffer that is within the wire zone (i.e., within 15 feet, horizontally, of any conductor; see Figure 1), all woody vegetation over 10 feet in height, whether 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 stream buffer 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 four year 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. ;
- i. Removal of capable species and dead or hazard trees within the appropriate stream buffer 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 the wire zone all woody vegetation may be cut to ground level;
- j. No slash will be left within 50 feet of any stream; and,
- k. Any construction access roads that must cross streams or brooks must be designed, constructed, and maintained to minimize erosion and sedimentation.

These additional restrictions will allow for taller vegetation within the appropriate stream buffer to provide shading and to reduce the warming effect of direct sunlight (insolation). Low ground cover vegetation will also remain to filter any sediment in surface runoff. The restrictions are

also intended to minimize ground disturbance and prevent or minimize the surface transport of herbicides and petroleum products to streams. These restrictions will allow the stream buffers to provide functions and values similar to those provided prior to transmission line construction.

5.2 Vegetation Maintenance within the Roaring Brook Mayfly and Northern Spring Salamander Conservation Management Areas of Mountain Brook and Gold Brook

During consultation with the MDIFW for the NECEC project, MDIFW identified Gold Brook (PSTR 15-06, PSTR 16-07, PSTR 16-10 and PSTR 16-15) and Mountain Brook (PSTR-33-01, PSTR-EM-34-01, PSTR-EM-34-01) as high priority resources in which full height vegetation should be retained within the 250-foot conservation management areas (CMAs) to protect habitat for Roaring Brook Mayfly and Northern Spring Salamander. Mountain Brook contains both Roaring Brook Mayfly and Northern Spring Salamander habitat, while field survey results concluded that Gold Brook only contains Roaring Brook Mayfly habitat.

Installation of taller structures will facilitate the retention of full height vegetation within these CMAs. Although CMP will retain full height vegetation within these CMAs, CMP will selectively cut at ground level and remove any trees within these CMAs that are intruding into the conductor safety zone or are at risk of growing into the conductor safety zone prior to the next scheduled vegetation maintenance.

Access roads and structure preparation/installation areas within these conservation management areas will be maintained as scrub-shrub habitat to allow for maintenance, repair and/or emergency access.

6.0 Vegetation Maintenance within Significant Vernal Pool Buffers

Vegetated buffers of 100 feet, as measured from the edge of the pool depression, will be established for SVPs crossed by the transmission line corridor. Vegetation maintenance within the SVP buffers will be subject to the same procedures and prohibitions, as applicable, that are required in the typical transmission line corridor, as well as to the additional measures below.

6.1 Additional Vegetation Maintenance Restrictions within Significant Vernal Pool Buffers

The following additional restrictions apply to vegetation maintenance within SVP buffers:

- Mechanized equipment will not be allowed within the vernal pool depression, unless the depression encompasses the entire width of the transmission line corridor. Mechanized equipment will only be allowed to cross the vernal pool depressions during frozen or dry conditions or with the use of mats;
- Between April 1 and June 30 in any calendar year, no vegetation maintenance using tracked or wheeled equipment will be performed within the 100-foot buffer. Maintenance will be performed using only hand tools during this period;

- Between April 1 and June 30 in any calendar year, no vegetation maintenance will occur within 25 feet of the SVP pool depression;
- No refueling or maintenance of equipment, including chainsaws, will occur within 100 feet of SVP pool depression, unless conducted on a public access road; and
- No herbicide use is permitted within 25 feet of the SVP pool depression.

7.0 Vegetation Maintenance within Moderate or High Value Inland Waterfowl and Wading Bird Habitat

Inland Waterfowl and Wading Bird Habitats (IWWH) are habitats mapped by the MDIFW that contain an inland wetland complex used by waterfowl and wading birds, plus a 250-foot nesting habitat area surrounding the wetland. The nesting habitat is considered to be part of the mapped IWWH. No additional buffers are proposed for IWWHs beyond this mapped habitat, and as such the vegetation maintenance restrictions apply to the mapped habitat only.

Vegetation maintenance within the IWWH will be subject to the same procedures and prohibitions, as applicable, that are required in the typical transmission line corridor and for stream buffers.

7.1 Additional Vegetation Maintenance Restrictions within Inland Waterfowl and Wading Bird Habitat

The following additional restrictions apply to vegetation maintenance within mapped IWWH:

- Between April 15 and July 15, use of motorized vehicles (e.g., all-terrain vehicles) and mechanized equipment (e.g., chainsaws or brush cutters) within IWWH is prohibited. Use of non-mechanized hand tools is allowed during this time period;
- No refueling or maintenance of equipment, including chainsaws, will occur within the IWWH, unless done so on a public access road;
- No herbicide use is permitted within 25 feet of any wetland within the mapped IWWH; and
- 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.

8.0 Vegetation Maintenance within Mapped Deer Wintering Areas

Deer Wintering Areas (DWA) provide important refuge for white-tailed deer (*Odocoileus virginianus*) during the winter months in northern climates and are typically characterized by an extensive stand of mature softwood species with a dense forest canopy.

With the exception of the Upper Kennebec DWA, described in Section 2.3 above, no additional vegetation maintenance restrictions are proposed within mapped DWAs, as all capable species must be removed from these and other areas within the transmission line corridor in order to comply with NERC Transmission Vegetation Management standards.

9.0 Vegetation Maintenance within State mapped Rusty Blackbird Habitat

In consultation with MDIFW for the NECEC project, CMP agreed to allow for the retention of 10-foot to 15-foot tall spruce/fir vegetation within the Rusty Blackbird habitat located on Segment 1. The additional height will avoid project impacts to the habitat of this State Species of Special Concern.

Vegetation clearing activity is prohibited in this habitat between April 20 and June 30. During routine vegetation maintenance, hardwood and softwood specimens that are taller than 15 feet, or are anticipated to grow taller than 15 feet prior to the next scheduled vegetation maintenance, will be cut at ground level. Spruce/fir vegetation 10-15 feet in height will be retained. The access roads and structure preparation areas within the Rusty Blackbird habitat will be maintained as scrub-shrub habitat to allow for maintenance, repair and/or emergency access. The habitat will be flagged prior to construction and identified in a database maintained by CMP, further described below in Section 13, Locating and Marking Buffers and Habitats.

10.0 Vegetation Maintenance within Rare Plant Locations

Vegetation maintenance of the transmission line corridor has the potential to impact rare plants and/or alter their habitat. The following additional vegetative maintenance restrictions will minimize such impacts. The additional restrictions will apply only to the demarcated locations of the identified rare plants. No additional buffers will be established surrounding rare plant locations. These restrictions are intended to maintain existing hydrology and limit soil disturbance within rare plant locations.

10.1 Additional Vegetation Maintenance Restrictions within Rare Plant Locations

The following additional restrictions will apply to vegetation maintenance for the rare plant occurrences in the Project area:

- All capable tree species will be cut by hand (chainsaws, hand saws or axes). No other mechanized cutting equipment shall be used within these habitats;
- Unless rare plant locations encompass the entire width of the transmission line corridor, mechanized equipment will only be allowed to cross rare plant locations during frozen conditions or with the use of mats;
- No refueling or maintenance of equipment, including chainsaws, will occur within demarcated rare plant locations, unless done on a public access road; and

- No foliar herbicide use is permitted within the demarcated rare plant locations, however cut surface herbicides may be used on capable species and specimens outside of Segment 1.
- No herbicides will be used within the full width and length of the transmission line corridor adjacent to the 174-acre Casavant parcel near Allen Pond in Greene, i.e., the portion of the corridor containing transmission line structures 432-23 to 432-29.1;
- Crossing of rare plant locations with mechanized equipment:

All-Terrain Vehicles (ATVs)

- Due to small footprint, relatively light weight, and infrequency of use, ATV impact is minimal, therefore crane mats will not be used.
- If rare plants do not encompass entire ROW width, ATVs will avoid/travel around rare plants.
- If rare plants encompass entire ROW width:
 - ATVs will utilize existing rare plant travel path/crossing if one exists.
 - If no rare plant crossing exists, ATVs will cross at narrowest point of the rare plants and will restrict this crossing to a single travel lane.

Heavy Equipment/Vehicles

- During emergency repair & maintenance work, crane mats will not be used. Heavy equipment/vehicles will utilize existing rare plant crossings if available.
- During planned repair & maintenance work:
 - If rare plants do not encompass entire ROW width, heavy equipment/vehicles will avoid/travel around rare plants. Crane mats will not be used.
 - If rare plants encompass entire ROW width, and there is an established travel path/crossing through the rare plants, heavy equipment/vehicles will utilize this crossing, and crane mats will not be used.
 - If rare plants encompass entire ROW width, but there is no established travel path through the rare plants, heavy equipment/vehicles will cross rare plants using crane mats.

11.0 Maintenance Procedures for Mapped Significant Sand and Gravel Aquifers

Transmission lines located over mapped significant sand and gravel aquifers are subject to the typical transmission line corridor maintenance procedures, except that no refueling or maintenance of equipment, and no herbicides may be mixed, transferred or stored, over the mapped significant sand and gravel aquifers, unless done so on a public access road.

12.0 Tapered Vegetation Maintenance Along the Appalachian Trail

As required by Appendix A of the Memorandum of Agreement among the United States Army Corps of Engineers, United States Department of Energy, United States Department of Interior National Park Service, Maine Historic Preservation Commission, and CMP, vegetation tapering is required on both the forested (generally southerly) side of the corridor and the currently cleared (generally northerly) side of the corridor in the vicinity of the Appalachian Trail in Bald Mountain Township. These areas include the following coordinates:

From: 45° 15' 17.849" N, 69° 49' 58.76" W **To:** 45° 14' 40.565" N, 69° 49' 28.577" W

Tapering adjacent to Section 432 will be maintained in a similar fashion as described in Section 2.4, Tapered Vegetation, above. However, scrub shrub vegetation will be maintained in the center of the corridor beginning from the outside edge of the wire zone west of Section 432 to the outside edge of the wire zone east of Section 222. Vegetation on the Section 222 side of the corridor, which is currently cleared of capable vegetation, will be allowed to grow into a tapered configuration over time.

13.0 Locating and Marking Buffers and Habitats

A database will be maintained, 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. The distance and direction from the nearest structure to the sensitive area will be included with the name of the area and the structure number. All structures along the transmission line corridor will be numbered at the time of construction.

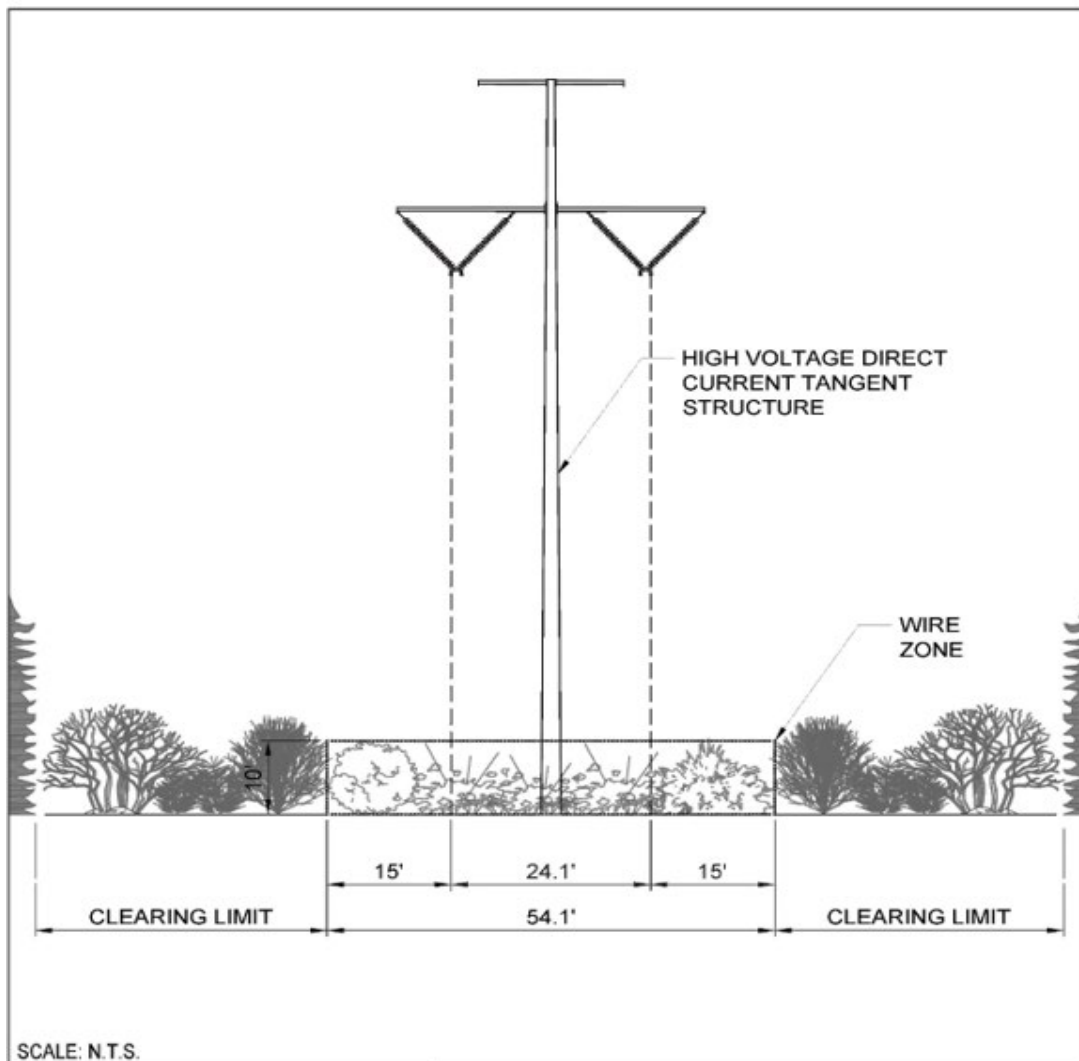
To aid in identifying restricted areas, buffers and restricted habitats may be located and demarcated in the field using brightly colored flagging or signage prior to the initiation of maintenance activities along the transmission line corridor. Alternatively, use of GIS data and GPS equipment may be used to provide accurate location of resources and associated buffers during maintenance activities. If desired, maintenance personnel may permanently demarcate restricted habitats to aid in long-term maintenance activities. Maintenance contractors working on the transmission line corridor will be provided a copy of this VMP. Use of this VMP in conjunction with the As-Built Plan & Profile drawings will enable maintenance contractors to locate and mark restricted areas in the field.

14.0 Maintenance Personnel Training

Personnel who will conduct vegetation maintenance activities on the transmission line corridor will receive appropriate environmental training before being allowed access to the transmission line corridor. Maintenance personnel will be required to review this VMP prior to the training and before conducting any maintenance activities. The level of training will be dependent on the duties of the personnel. The training will be given prior to the start of maintenance activities. Replacement or new maintenance personnel that did not receive the initial training will receive similar training prior to performing any maintenance activities on the transmission line corridor.

The training session will consist of a review of the buffers and restricted habitats, the respective maintenance requirements and restrictions for each, and a review of how these areas and resources can be located in the field. Training will include familiarization with and use of GIS information and sensitive natural resource identification in conjunction with the contents of this VMP, as well as basic causes, preventive and remedial measures for contamination, and erosion and sedimentation of water resources. Training will also include a review of safety and the proper use of appropriate maintenance tools.

Figure 1: Vegetation Maintenance for the HVDC Transmission Line



1. With the exception of the vegetation maintenance practices described in Section 2.0 (i.e., full height canopy, minimum 35-foot tall trees, and vegetation tapering requirements in Segment 1) capable species, regardless of height, are cut back to ground level or treated with herbicides within the entire length and width of the transmission line corridor during scheduled vegetation maintenance (every 4 years). However, within stream buffers, only capable specimens over 10 feet tall may be cut or treated (specimens at or above this height are likely to grow into the conductor safety zone prior to the next scheduled vegetation maintenance cycle).
2. All woody vegetation over 10 feet in height and inside the wire zone, whether capable or non-capable, is cut back to ground level during scheduled vegetation maintenance.
3. Vegetation maintenance cycle may not exceed 3 years on Segment 1 without prior approval from MDEP.

Figure 2. Tapered Vegetation Maintenance Cross Section

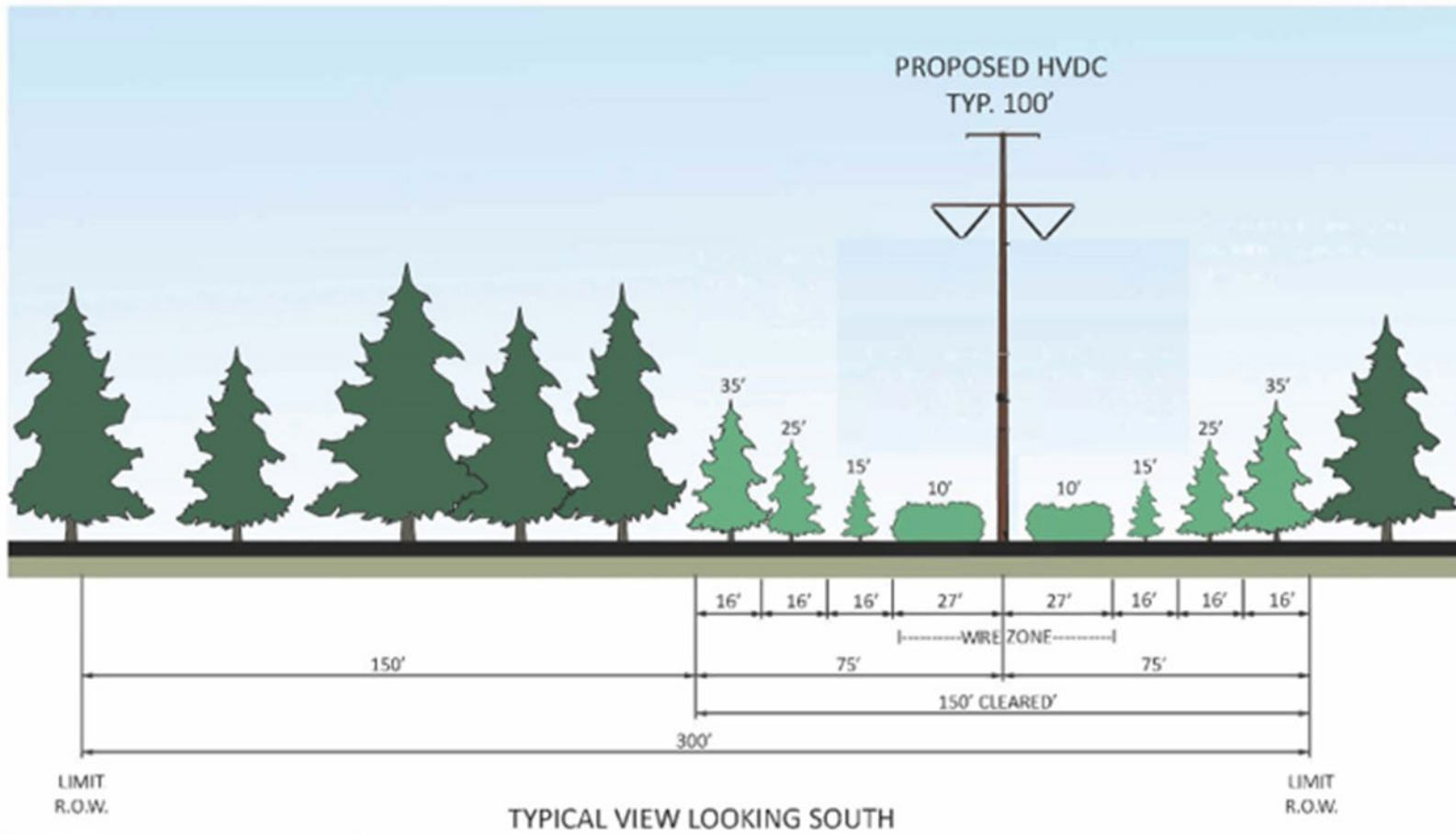


EXHIBIT 7 ENVIRONMENTAL GUIDELINES



**Environmental Guidelines
For Construction and Maintenance
Activities on Transmission Line
And Substation Projects**

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CENTRAL MAINE POWER COMPANY

Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects

1.0 INTRODUCTION

These guidelines contain standards and methods used to protect soil and water resources during construction, reconstruction, and maintenance of transmission lines and substations. They are based on practical methods developed for construction in utility corridors and their use is enforced by both State of Maine and Federal regulatory agencies. The construction practices described in this manual are typically required by the regulatory agencies for all projects. These practices are commonly referred to as Best Management Practices (BMPs). Illustrations have been provided as part of this manual (Appendix D) which demonstrate both the proper and improper techniques used for the more common construction activities.

All contracts for work performed on Central Maine Power Company (CMP) transmission line rights-of-way and substation sites will include these specific guidelines to ensure the project is constructed in an environmentally conscious manner. CMP personnel or their designated representatives will ensure that the guidelines are followed by inspecting all work and prescribing corrective steps to be taken where necessary. While this manual takes into consideration legal requirements, project personnel are still responsible for compliance with all federal, state, and local requirements.

This guide uses a number of scientific and technical terms. Definitions of these terms are provided in Appendix A.

2.0 PLANNING AND DESIGN CONSIDERATIONS

Planning is an important practice that will reduce the risk of erosion on a construction site, saving both time and money for Central Maine Power Company and its contractors. An erosion control plan should be prepared during project planning and design phases. It will likely be required for any Maine Department of Environmental Protection and/or local permits.

The erosion control plan should consist of:

- A narrative.
- A map.
- Plan details.

The narrative should describe the proposed project, existing site conditions, adjacent land uses, and any natural resources or properties that might be affected by the project. Other important details to include are descriptions of critical areas, proposed construction start and end dates, construction sequence, and brief descriptions of erosion and sedimentation control measures,

inspections and maintenance programs, and other clearing or construction that has taken place on the site in the last five years.

The map should include pre-development site contours at a scale to identify runoff patterns (minimum 5-foot contour interval), final contours, limits of clearing and grading, existing buffers, critical areas, natural resources, erosion control measures, and other clearing or construction that has taken place on the site in the last five years.

The plan details should include drawing of the erosion control structures and measures, design criteria and calculations, seeding specifications, and inspection and maintenance notes.

Key considerations include resource identification, familiarizing all parties with the construction site and limitations, and construction sequence.

2.1 Resource Identification

Sensitive natural areas which will receive priority treatment include:

- Streams and rivers.
- Great ponds.
- Wetlands.
- Steep slopes.
- Unstable soil conditions.

Sensitive natural areas which may receive priority treatment, depending upon the specifics of the project, include:

- Stream, river, pond, and wetland buffers.
- Significant wildlife habitats.
- Habitat for rare species.
- Historic and prehistoric sites.

During the planning phase, all sensitive natural areas that require priority treatment will be identified. The method of avoiding or crossing the sensitive natural areas to minimize impacts will be identified and incorporated into the project plans. Project plans should be designed and drawn to provide contractors and inspectors with a comprehensive reference guide that include, but is not limited to, locations of sensitive natural areas, access, and abutter and landowner issues. If modifications to the plans need to be made in the field, a designated person shall make necessary changes and shall notify all necessary personnel promptly. Copies of these plans should be provided and explained to equipment operators to assure that construction practices meet the intent of avoiding or minimizing impacts to the identified sensitive natural areas. In addition to the plans, the proposed access ways and water/wetland crossing locations, as well as other environmentally sensitive areas where activities will be restricted or prohibited, will be flagged and/or have signs posted.

Prior to crossings or construction in or near any sensitive natural areas, a “walk-through” will be conducted. Attendees at the walk-through will include: 1) the contractor, 2) CMP and/or any designated representative, and may include 3) any assigned Third Party Inspector. The purpose of the walk-through is to establish the following objectives, **prior to any clearing or construction work**:

- Identify available or alternate points of access to the project site.
- Identify sensitive natural areas.
- Identify future “No-Access” areas.
- Review color designation for all flagging used.
- Establish the Communication Chain of Command (Contact Point).
- Identify and flag access/construction roads within the ROW and/or project area.
- Establish methods of access over water resource areas (mats, timber corduroy, frozen ground, tracked equipment).

In order to minimize impacts to sensitive natural areas, the above objectives will continually be evaluated throughout the construction process. Project superintendents, foremen, and inspectors should also monitor weather conditions and reports on an on-going basis. Knowledge of changing or anticipated wet weather will allow time to address erosion control needs. In this way, CMP and its contractors will be prepared to respond to changing environmental conditions (e.g., unusually wet or dry weather) and other unknowns that are inherent in the construction and maintenance of transmission lines.

2.2 “Walk-Through” Mechanics

2.2.1 Use of Flagging and Signs

Flagging will be conducted at the time of the walk-through in order to visually identify select features or construction methods to be used. Wetlands may be flagged earlier as part of project permitting. Signs may also be installed following the walk-through to direct construction to approved access routes and away from “no access” areas. The CMP flagging color-code is as follows:

- **Glow-pink** with the printed words “Wetland Delineation”, “Wetland Boundary” or “Wetlands”. This flagging denotes the edge of wetlands.
- **Red** with or without the printed words – “Do Not Cross”. This flagging denotes a No-Access area where no equipment is allowed.
- **Yellow** – no printed words. This flagging denotes the location of an environmental measure such as a waterbar, hay bale barrier, or silt fence.
- **Blue** – no printed words. This flagging denotes approved travel ways. This is typically flagged on each side of the access-way to denote the designated travel lane for all access.
- **Glow-pink with black stripes** or otherwise printed with the words Buffer or Wetland Buffer. This denotes a setback from a water resource and should be treated the same as No-Access area.

2.2.2 Identification and Use of Existing Roads

Available logging, farm, or access roads, as well as other existing rights-of-way, will be utilized for access to and from transmission line rights-of-way with permission of the respective landowners. In order to minimize ground disturbance, existing roads within the right-of-way and wetland/stream crossing areas will be used whenever possible for travel during construction, unless a better route is agreed upon during the walk-through. The movement of equipment and materials within the transmission line right-of-way will be confined as much as possible to a single road or travel path.

For example, it may be better to construct new access roads in order to: (1) minimize the span of a wetland or stream crossing, or (2) avoid the more environmentally sensitive or “wetter” portions of a wetland or stream crossing.

In all cases, CMP and its contractors will attempt to avoid and minimize impacts to sensitive natural areas. As a result of this procedure, wetland and stream crossings, steep slopes, unstable soils, and other sensitive natural areas will be avoided and adverse impacts minimized whenever practicable.

2.3 Construction Sequencing

Although a “Project Plan” may be specific in identifying the *locations* of water resource areas (wetlands, streams, etc.), and the *methods* of access over water resource areas (crane mats, frozen ground, etc.) it should not dictate *when* construction activities should occur. It would be impractical to include day to day activities in the “Project Plan” such as, ‘pole X will be installed on Y date’. However, including environmental considerations in the daily and weekly project planning is very important. Factors such as the project schedule and weather often determine where and when construction activities occur; environmental impacts should also be considered. Below are some guidelines:

- Work closely with the individual(s) in charge of environmental compliance to plan project activities.
- Construction activities that cause soil disturbance should not occur during or just prior to forecast heavy rain events.
- Coordinate access planning with all of the contractors on the project. Often temporary access roads are used by several different contractors and the construction and use of temporary access roads can cause significant soil disturbance. Minimize equipment and vehicle travel on temporary access ways.
- Stabilize/restore disturbed areas as soon as possible, preferably while equipment is on site. Additional trips with equipment can create more soil disturbance which will need to be stabilized. Often a site can and should be stabilized within hours of when the soil disturbance occurred.
- Use frozen conditions to your advantage. There may be instances where water resource areas can be crossed during frozen conditions in lieu of installing crane mats. Before using this technique consult with the project environmental inspector.

- Crane mats should be removed as soon as they are no longer needed and/or when conditions are favorable.

3.0 STANDARDS FOR CONSTRUCTION

3.1 Road Construction

The following five standards apply to the construction and/or upgrade of all roads, skid trails, yarding areas, or work pads whether temporary or permanent.

1. Where construction will be located near water resources, such that material or soil may be washed into them, these disturbances will be set back from the edge of the water resource to maximize the amount of undisturbed filtering area between the disturbed area and the resource. These “filter strips” will consist of an area of undisturbed vegetation between the edge of disturbed area and/or silt fence/hay bale barriers placed to intercept any sediment load in runoff water before it can enter the resource area. In order to maintain the integrity and effectiveness of filter strips, sediment barriers should be installed very early in the construction sequence, and they need to be monitored to make sure they are functional. Effective filter strip widths may vary from only a few feet in relatively well drained flat areas to as much as several hundred feet in steeper areas with more impermeable soils. In steep terrain, additional erosion and sedimentation control measures will be installed at the low point where the work area drains into the filter strip when exposed soils exist and the flow path may result in channelization of runoff. The minimum width of the buffer strip shall be 25 feet or in accordance with local CEO or DEP regulations. The width of the filter strip shall be increased proportionately for slopes longer than 150 feet or for higher sediment concentrations. **Table 1** below provides the recommended widths for the filter strips according to the slope of land between the edge of the resource and any exposed soil.

Slope of Land Between Disturbance and the Resource (Percent)	Width of Filter Strip* (Feet)
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70	165
*Measured along surface of the ground	

2. Wherever possible, construction equipment will either avoid steep slopes or proceed across the slope in a safe manner to avoid excessive disturbance of vegetation and soils. Equipment will not travel straight up or down any slopes with a grade steeper than 10 percent, except where necessary due to safety concerns and/or terrain constraints.
3. Where access roads or construction areas are to be built across the slope, the area will be properly sloped, slanting away from the cut bank to the outside edge of the roadbed in order to facilitate road surface drainage.
4. Slopes of cut-and-fill banks will be no steeper than 1 horizontal to 1 vertical. If located within 100 feet of water resources, the slopes will be no steeper than 2 horizontal to 1 vertical.
5. Rivers, streams, and wetland areas will be crossed, where necessary, at right angles to the channel and/or at points of minimum impact. To insure that natural drainage patterns will not be altered or restricted as a result of construction activities, crossings will be designed and constructed according to specific standards outlined below.

3.2 Stream or Wetland Crossings

The following standards apply to all unavoidable stream, drainage way, or wetland crossings encountered while accessing the project site or on the project site itself.

3.2.1 Types of Crossings Used

The type of crossing used for access is dependent on: the purpose and use of the crossing, the nature of the resource being crossed, ground conditions present at the time of construction, and construction materials available. Some planning guidance is provided below. The appropriate means and location of the crossing will be determined at the time of the formal walk-through. It is important to consult with the project environmental inspector prior to installing any crossing.

- Permanent culverts and bridges will be used only where long-term, continued, and frequent access is required (such as substation access roads).
- Temporary crossings will be used at all other locations. Temporary bridges, culverts, or crane mats must be used to cross any streams, drainage ways, or wetland swales that contain: (1) flowing water, (2) standing water, (3) saturated soils, or (4) organic/mucky soils.
- The use of corduroy as crossing material will be limited to wetlands which are not anticipated to have flowing or standing water during the construction period.
- In certain cases, no crossing material will be required if the stream bottom or drainage way is dry and contains a gravel or solid rock bottom (a “ford”). Fords can only be used if they will cause no unreasonable sedimentation of the stream and no unreasonable alteration of the stream banks and bottom.
- All crossings should include water bars or broad based dips or turn outs on the access, appropriately spaced on each side of the crossing, to promote filter-strip treatment of runoff. Consult Table 4 on page 12 of this document for specific water diversion structure spacing standards.
- All temporary crossings must be stabilized within seven (7) days of its removal, unless specified otherwise.

3.3 Construction in Wetlands

Where structures are to be placed in wetlands, topsoil must be excavated first, and stockpiled separate from subsoil. Be sure that stockpile soils are placed in such a manner that they are readily replaced into the excavated area. Soils shall be replaced into the excavated area in the opposite order they were removed. Excavation and pole placement in wetland areas should be completed within the same day. After pole installation, topsoil must be restored to the original surface grade, except where mounding around a structure is necessary for structure stability.

4.0 INSTALLATION OF CROSSINGS

4.1 Bridges

Bridges are a preferred method for temporary access waterway crossings. Normally, bridge construction causes the least disturbance to the waterway bed and banks when compared to the other waterway crossing methods. Most bridges can be quickly removed and reused without significantly affecting the stream or its banks and without interfering with fish migration.

Materials

Access bridge construction typically entails the use of log stringers as construction materials.

Sizing

Table 2 below illustrates the log sizing requirements depending on the span and anticipated loads.

Table 2		
Log Bridge Stringer Requirements		
Span	Minimum Log Diameter*	
	(80,000 lb. Load)	(40,000 lb. Load)
8 ft.	16 in.	12 in.
12 ft.	18 in.	14 in.
16 ft.	20 in.	16 in.
Wheel guards: 10" diameter - Size of deck planks: 4" x 12" x 12' * Assume 6 stringers at 24" centers		

Positioning

The following is guidance for the positioning and installation for all permanent and temporary bridges:

- Access roads will cross streams at right angles to the channel at a location with firm banks and level approaches whenever possible.
- Bridge piers and abutments will be aligned parallel to the stream flow so that the original direction of stream flow is not altered.
- Piers and abutments will be imbedded in good foundation material. The grade of the bridge should coincide with that of the road wherever practicable.

For additional specifications on bridge construction, refer to section F-2 of the Maine Erosion and Sediment Control BMPs (see full citation in Appendix C).

4.2 Culverts

Materials

Permanent culverts will be either corrugated metal or plastic pipe. Temporary culverts will be corrugated metal, plastic pipe, or lumber ties. Chemically-treated wood will be not used.

Sizing

Permanent culverts will be sized to have a diameter of at least 3 times the cross-sectional area of the stream channel or will be designed to accommodate 25-year frequency flows. Multiple culverts may be used in place of one large culvert if they have the equivalent capacity of a larger one. A culvert sizing criteria table (3x Rule) produced by the MDEP can be found in Appendix G. However, it is recommended that an engineer be consulted when installing any permanent culvert.

Temporary culverts will also be sized to provide an opening at least 3 times the cross-sectional area of the stream channel and sized to accommodate a 25-year frequency storm flow. The stream channel cross-section will be determined at highest flows or will be approximated during periods of lower flows using the apparent natural high water marks remaining on the stream banks. For small intermittent streams, drainage ways or wetland crossings, the minimum sized culvert that may be used is 18 inches. Multiple culverts may be used in place of one larger culvert if they have the equivalent capacity of a larger one.

Positioning

The following is guidance for the positioning of all permanent and temporary culverts:

- Culverts should be placed to allow for the crossing to take place at right angles to the channel to assure that natural drainage patterns will not be altered.
- Culverts should be placed at the point of narrowest crossing and where firm banks and level approach slopes are available. Slopes should be no greater than 1.5 to 1.

Installation

The following is guidance for the installation of all permanent and temporary culverts:

- Culverts should be of sufficient length to allow both ends to extend at least one foot beyond the toe of any fill used to cover the culvert.
- Inlet and outlet armoring shall extend at least one pipe diameter beyond the upstream and downstream end of the culvert. See Table 3 below for outlet protection in erodible areas.
- Culverts should be bedded on firm ground. Supplemental use of geotextile with gravel can be used to create this firm base. Permanent culvert installation should include firm compaction of the foundation and the fill around the sides of the culvert. Compaction should be done in no more than 8-inch lifts.

- Both the inlet and outlet ends of the culverts will be set at or slightly below the natural stream bottom to allow passage of fish and other aquatic life at all levels of flow. At no point should either end of an installed culvert be positioned in the air out of the water.
- Multiple culverts must be offset in order to concentrate low flows into the culvert within the natural channel.
- When working in and around a perennial stream, temporary stream diversion may be necessary to avoid creating turbidity in the stream water. This type of work requires a permit from Maine DEP, and must be coordinated with the project environmental inspector.
- Fill used to bury the culvert will be compacted at least half-way up the side of the culvert for its full length in insure that flowing water will not undermine the culvert.
- Culverts will be covered with fill to a depth of at least one foot or one and a half times the culvert diameter, whichever is greater.
- Road fill at the upstream (headwall) and downstream (out-fall) ends of culverts will be armored with either rock rip rap or logs to protect the road fill from being eroded by the action of water or road traffic. This material will be installed up to the level of anticipated high water.
- In areas where the streambed appears highly erodible, the streambed at the outlet end of the culvert will be lined with riprap to prevent erosion and potential stream bed scour. Table 3 below indicates the distances away from the culvert to install such riprap.

Culvert Diameter (Inches)	Length of Rock Protection From Culvert (Feet)
12 – 20	7
21 – 24	9
30	11
36	13
42 – 48	18
54 – 60	24
66 – 78	32

Removal

Temporary culverts will be removed once their use is no longer necessary. The fill material can be redistributed and spread out on the nearby uplands at a distance sufficient to prevent its reentry into the resource. Silt fence/hay bales, seeding, and mulching may be necessary to stabilize this material. The banks and bottoms of the stream, drainage way, or wetland should be restored to original conditions. Exposed soils on the banks and within 100 feet of the crossing should be stabilized using seed and mulch. Some banks and steep slopes adjacent to streams may require stabilization with curlex or jute matting in combination with seed and mulch.

4.3 Mats (Crane or Swamp Mats)

CMP construction projects require that adequate mats are present at the project site prior to construction. A readily accessible source of mats should also be available in case construction conditions change and necessitate the need for more mats.

Materials

A number of different sized and constructed crane mats are typically available. CMP requires that the appropriate mats be used for the appropriate crossing. For example:

- Longer mats should be used for the longer crossing spans. This practice avoids the need to install additional mats within the crossing area in order to support the “span” mats.
- Mats should be in good condition to allow for their “clean” installation. Having mats in good condition prevents them from being dragged in versus them being carried in due to broken hitching cables, breaking apart on the job site, or becoming imbedded in mud due to their inability to support the required weight.
- Mats with partial/short timbers joined end to end should generally not be used to cross stream channels.

Installation

- Whenever possible, mats should be carried and not dragged. Dragging mats creates more soil disturbance which requires additional erosion control or final restoration work.
- At the crossing location, the ends of the crane mats should extend at least two feet onto firm banks or several feet into the upland edge of a wetland to assure a dry, firm approach onto the mats.
- At crossings which contain open or flowing water, the mats should be supported within the span using cross mats as abutments in order to prevent the impoundment of water or having water flow over the mats.
- At “dry” crossings where no water is present or anticipated during project construction, the mats may be placed directly onto the sensitive natural area in order to prevent excessive rutting, provided stream banks and bottoms are not altered.

Maintenance

Matted crossings should be continually monitored to assure their correct functioning. Mats which become covered with dirt should be kept clean and the material removed must be disposed of in an upland location. The material must not be scraped and shoveled into the water resource. Mats which become imbedded must be reset or layered to prevent mud from covering them or water passing over them.

Removal

Mats should not be removed until their use is absolutely no longer necessary. Specifically, all final restoration work should be completed prior to the mats being removed from the crossings. The planned removal of mats should be coordinated with CMP (or designated representative), the project environmental inspector, and any Third Party Inspector. As temporary structures, they should be removed within one year from the date of installation. All areas disturbed during ford removal shall be stabilized with seed and mulch.

4.4 Corduroy

Materials

Corduroy material will consist of de-limbed trees or logs. The logs must have a diameter greater than three inches at the small end and lengths greater than 18 feet. Shorter length material may be used only as described in the Installation section below.

Positioning

Corduroy should be placed perpendicular to the direction of travel. Corduroy should be placed at the point of narrowest crossing and where firm banks and level approach slopes are available.

Installation

The corduroy should be placed with the longer length pieces laid down first. The bed of corduroy should not only be placed within the low portions of the crossing but also for at least three feet up the sides of any upland side slopes in order to prevent rutting and sedimentation from the approaches to the crossing.

Once a thick base of corduroy has been laid, pieces shorter than 18 feet can be used to fill gaps and raise the elevation of the corduroy to provide for a more stable crossing.

Removal

Removal is the reverse of installation. Once the corduroy has been removed from the crossing, it may be moved off the right-of-way, burned, or chipped. The material may also be spread and distributed on the ROW over the nearby upland if in accordance with the Maine Slash Law (see Appendix E) and approved by a CMP representative. The banks of streams and drainage ways must be graded back to original conditions. Exposed soils on the banks and within 100 feet of the crossing must be stabilized using seed and mulch. Banks of drainage ways that are expected to receive high flows should be stabilized with seed and curlex or jute matting.

5.0 SURFACE WATER DIVERSION STRUCTURES (WATER BARS)

A number of above-ground structures or techniques are available to divert water out of travel ways and work areas in order to prevent subsequent runoff and erosion. The terminology and definitions for these techniques (i.e., broad-based dips, water bars, skid humps, water turnouts, and cross-drainage box culvert) vary, but the purpose of all is to redirect water moving down a slope into adjacent vegetated areas (filter strips). Any activities that involve land grading have the potential to cause sedimentation. Their use and installation needs to be carefully planned. Planning for these techniques must include timing, use of natural buffers (filter strips), mulching, and temporary and permanent seeding. Minimizing the area of soil exposed at one time is a key component of ensuring that surface water diversion structures function effectively. General standards for their construction are as follows.

Materials

Most of these structures are constructed by excavating or moving and shaping earth from within the access way or work area. The cross-drainage culvert structure typically uses logs or timber to form a box-like structure to catch water from travel ways or side ditches in order to direct it across the travel way and away from disturbed areas.

Positioning

These structures should be installed immediately above and along steep pitches in the road and below seepage areas on natural or cut banks; be sloped away from the travel surface and be sited to take advantage of existing vegetation for filtering. In some areas of exposed soils, the right-of-way might be sloped such that runoff traverses the disturbed area. In these areas, temporary water diversions should be deployed to divert the upgradient runoff away from the disturbed work area and towards a stable drainageway. The interval for installing these diversion structures depends on the slope of the road, as well as the nature of the road surface, soils, and wetness. Generally speaking, steeper slopes require shorter distances between diversion structures. The following table contains recommended distances between installed structures depending on slope.

Slope (Percent)	Spacing (Feet)
2	250
5	135
10	80
15	60
20	45
30	35

All of these structures should be sized in anticipation of greater flows resulting from snow melt, spring runoff, and storm rains.

Installation

These structures should be installed at 30-degrees angled down grade. The shape of the backside portion of the structure should have a reverse slope of about 3 percent. Use of a pop-level is recommended to ensure that drainage is away from the road. Structures should be constructed with rounded (not vertical) mounds and dips to allow for firm compaction and to allow re-vegetation.

In the case of the cross-drainage culvert, the minimum width of the open face of the culvert should be 18 inches. The travel surface should consist of at least 12 inches of gravel or soil over the culvert. The slope of the culvert should be a drop of at least 5 inches in every 10 feet of length to ensure proper drainage.

The inlet end of all structures should extend beyond the edge of the access road so that it fully intercepts water flows that may flow onto the access road. The outlet end of the structure should extend out enough to prevent water from flowing around and re-entering the road or work area.

The discharge ends of any of these diversion structures should outlet into a vegetated filter strip. Where heavy flows are encountered or anticipated, the outlet end of the structures should incorporate an apron of rock, gravel, or brush to reduce water velocities. If construction will

extend into fall and winter months, be sure to upgrade to meet winter standards all erosion control measures (e.g., increase amount of mulch, etc.), to protect the site from spring runoff.

Where the structure is within 100 feet of a stream or wetland, the incorporation of a small, excavated settling basin or ditch turnout to reduce the velocity of flows and the continued movement of sediment downslope should be considered. In addition, some type of sediment barrier (silt fencing or staked hay bales) will be installed at the outlet of the diversion structure, where vegetated filter strips are narrow or sparsely vegetated, in order to prevent sediment from eroding into water resources.

Maintenance

Due to repeated travel over these structures, maintenance is critical to their effective functioning. As the structure becomes flattened or rutted, it needs to be re-excavated or graded to ensure the interception and redirection of water runoff. The ends of any cross-drainage culverts should be maintained by clearing away any potential blockages.

Removal

After the completion of the construction project, removal of these structures is not a requirement, with the exception of the cross-drainage culvert. The structures can be left in place provided they have been suitably stabilized with seed and mulch. Any hay bale barriers or silt fence at the outlet end should be removed when the site has a healthy vegetative cover.

6.0 SEDIMENT BARRIERS (STRUCTURAL MEASURES)

6.1 Introduction

The use of properly installed erosion and sediment control barriers is a fundamental and critical component for preventing erosion at CMP construction projects. Erosion control barriers include silt fence, hay bales, and/or erosion control mix berms. In some cases, these barriers may be deemed unnecessary by CMP, its representatives, or a Third Party Inspector due to factors including slope and filter strip width within project boundaries. A typical CMP construction project will use a combination of barriers to effectively control erosion near water resources. Installation and diligent maintenance of these barriers serves the following purposes:

- Assures the environmental integrity of those upland and water resource areas not designated or permitted for disturbance. Specifically, it maintains the onsite vegetative community and water quality of the surface water within the watershed.
- Assures compliance with all applicable federal, state, and local environmental and land use regulations or permit conditions.

Generally, silt fence is the preferred barrier because: it traps a much higher percentage of suspended sediments than hay bales; it can be easier to install, obtain, and transport; and is less costly. In addition, the structural longevity of silt fence is 60 days or longer unlike straw or hay bales' longevity which is 60 days or less.

The standards and procedures outlined in this section of the manual are meant to address a majority of the situations encountered during transmission line and substation construction activities. For additional information on sediment and erosion control methods and techniques, or to address a particularly problematic situation, this manual should be used in conjunction with and supplemented by the Maine Erosion and Sediment Control BMPs. For other recommended references, see Appendix C.

6.2 Silt Fence

Materials

Silt fence is provided by a number of manufacturers and is generally a synthetic fabric pre-attached to wooden staking. The fabric should be pervious to water allowing a flow through rate of 0.3 gallon per square foot per minute. The fabric should contain stabilizers and ultraviolet ray inhibitors to allow it to sustain exposure of a minimum of 6 months. The height of the filter fabric should not exceed 4 feet in height.

Placement

Silt fence is to be utilized at the edge of any planned work area or area which will cause the disturbance of soil. It will be installed to intercept any sheet flow of water and detain sediment from entering water resources or leaving the project site. It should be installed prior to starting work. Given the expansiveness of CMP transmission line projects in particular, the amount of silt fence placement must be selective; however, it should still be used in amounts sufficient to meet potential changing conditions in a pro-active manner. After the primary stabilization measures (temporary and permanent) have been implemented, silt fence use is encouraged in the following selected locations, as appropriate:

- Around all substation project sites.
- Along all access roads or work areas that are within 100 feet of water resources.
- Along all access roads or work areas in upland settings that encounter seepage moving across slope.
- Around all stockpiled soils.

In general, the placement of silt fence is appropriate when:

- Serving a drainage area of no more than .25 acre per 100 feet of silt fence length.
- The maximum slope length behind the fence is 100 feet or less.
- The maximum gradient behind the fence is 50% or 2:1 horizontal/vertical.
- Where the filter strip is not of an adequate width (see Table 1).

Installation

The following installation guidelines are the minimum which should be implemented; however, appropriate changes to silt fence installation should be made as conditions change during the construction operation.

Silt fence will be placed an adequate distance (6-10 feet) beyond the toe of the slope (if there is sufficient room) to allow for sediment accumulation between the disturbed area and the down-

gradient water resources. If there is not sufficient room to place the silt fence an adequate distance beyond the toe of the slope, CMP, a representative of CMP, or the Third Party Inspector should be consulted. The barrier should be installed along the contour, within reason. The goal is to slow and pool the sediment-laden runoff to allow fine sediments to settle-out before the runoff enters the water resource. The ends of the barrier should be up-turned to maintain the pool volume.

A trench shall be excavated approximately 6 inches wide and 6 inches deep on the up-slope side of the silt fence alignment. The lower edge of the silt fence fabric should be entrenched for a distance of at least 4 inches up-slope and then back-filled. Should frozen or rocky ground conditions prevent the effective or practical use of trenching, materials such as bark/wood chips, wood fiber mulch, or a soil erosion control mixture can be used. This material is to be mounded on top of at least 4 inches of filter fabric which would otherwise be trenched.

Silt fence should be installed in a continuous roll to avoid the need of a joint between different pieces of fence. If joints are necessary, filter fabric shall be “spliced” together at a support post, securely sealed, and with a minimum of 6 inches of overlap. Splicing rolls of silt fence entails twisting end posts together, creating a continuous section of silt fence.

Support posts should be placed on the down-slope side or the side closest to or facing the water resource. The posts should be placed 6 feet apart (a maximum of 10 feet may be acceptable in some locations) and driven securely into the ground, typically about one foot deep. Silt fence usually has posts pre-attached.

Silt fence should not be installed in streams or drainage ways where concentrated water flow is present or concentrated flows are anticipated.

Maintenance

Once a week, or after rainstorms producing at least ½ inch of rainfall, whichever is more frequent, the contractor is responsible for inspecting all temporary erosion and sediment control barriers. Such inspection is necessary to assure that the barriers are functioning properly as well as identifying new areas requiring installation. A maintenance log should be kept of all erosion control changes, improvements, and maintenance performed.

If any barriers are not functioning properly, they will be repaired or replaced. A sediment control barrier is not functioning if:

1. Water is flowing around the sides or under the barrier.
2. Soil has built up behind the barrier to the point more than half-way up the fence.
3. There is excessive sag in the fence.
4. There is evidence of sedimentation such as gully erosion, slumping of banks, or the discoloration of water outside of the perimeter silt fence.

Corrective measures include removing accumulated sediment from behind the barrier, restaking, extending the ends of the fence, or installing another fence further upslope.

Removal

Installed silt fence will be removed once it is evident that the soils have become stabilized and the potential for erosion no longer exists. In most cases, the silt fence will not be removed until at least one growing season has past. Removal of silt fence should be coordinated with CMP or their designated representative.

Any ridges or mounds of soil or caught sediment remaining in place after the silt fence has been removed, must be leveled-off to conform to the existing grade. Any newly exposed soil that may erode must be seeded and mulched.

All removed silt fence must be properly disposed of off the project area.

6.3 Hay Bales

Placement

Like silt fence, hay bale barriers can be utilized at the edge of any planned work area or areas where soil disturbance has occurred or will occur. Barriers are installed to intercept sheet flow of water and detain sediment from entering water resources or leaving the project site. Given the expansiveness of CMP transmission line projects in particular, the amount of hay bale barrier placement must be selective, but still in amounts sufficient to meet potential changing conditions in a pro-active manner. Hay bale barriers will be used, as appropriate, in the following locations:

- Around all substation project sites.
- Along all access roads or work areas that are within 100 feet of a water resource area.
- Along all access roads or work areas in upland settings that encounter seepage moving across slope.
- Around all stockpiled soils.

In general, the placement of hay bales is appropriate when:

- Serving a drainage area of no more than .25 acre per 100 feet of barrier length.
- The maximum slope length behind the barrier is 100 feet or less.
- The maximum gradient behind the barrier of 50% or 2:1 horizontal/vertical.
- Where the filter strip is not of an adequate width (see Table 1).

Installation

The following installation guidelines are the minimum which should be implemented; however, appropriate changes to hay bale installation should be made as conditions change during the construction operation.

The barrier will be placed an adequate distance (6-10 feet) beyond the toe of the slope (if there is sufficient room) to allow for sediment accumulation between the disturbed area and the down-gradient sensitive areas. If there is not sufficient room to place the hay bales an adequate distance beyond the toe of the slope, CMP, a representative of CMP, the project environmental inspector, or the Third Party Inspector should be consulted. Within reason, the barrier should be installed along the contour. The goal is to slow and pool the sediment-laden runoff to allow fine

sediments to settle-out before the runoff enters the water resource. The ends of the barrier should be up-turned to maintain the pool volume.

A shallow trench shall be excavated the width of the bale and to a minimum depth of 4 inches in which to bed the bale. The excavated soils are then used to seal the lower inside (up-slope) edge of the barrier. The bales should be set tightly together and entrenched with the baling string oriented on the sides (i.e., not touching the ground) in order to prevent deterioration of the string.

Every bale should be staked using 2 stakes per bale. The stakes should be driven in at angles such that it binds and forces abutting hay bales together.

Gaps between bales shall be packed with loose hay to prevent water from escaping between the bales.

Hay bales will not be placed in streams where flow is present or anticipated.

Maintenance

Once a week, or after rainstorms producing at least ½ inch of rainfall, whichever is more frequent, the contractor is responsible for inspecting all temporary erosion and sediment control barriers. Such inspection is necessary to ensure the structures are functioning properly as well as identifying new areas requiring installation. A maintenance log should be kept of all erosion control changes, improvements, and maintenance performed.

If any barriers are not functioning properly, they must be repaired or replaced. A sediment barrier is not functioning if:

- Water is flowing around the sides or under the barrier.
- Soil has built up behind the barrier to the point more than half-way up the hay bale or where there is excessive lean to the barrier.
- There is evidence of sedimentation such as gully erosion, slumping of banks, or the discoloration of water outside of the hay bale barrier.

Corrective measures include removing accumulated sediment from behind the barrier, re-staking, extending the barrier at the ends, or installing another barrier further up-slope.

It is not recommended that straw or hay bales be used for periods greater than 60 days.

Removal

Installed hay bales will be removed once it is evident that the soils have become stabilized and the potential for erosion no longer exists. In most cases, the hay bale barrier will not be removed until at least a healthy growth of vegetation is established on the disturbed site. Removal of hay bale barriers should be coordinated with CMP or their designated representative.

Any ridges, mounds of soil, or caught sediment remaining in place after the hay bales have been removed, must be leveled-off to conform to the existing grade. Any newly exposed soil that may erode must be seeded and mulched.

All removed hay bales must be properly disposed of, or broken up and used as mulch on the bare soils near the barrier.

6.3.1 Problems With Straw or Hay Bale Barriers

There are several situations where straw or hay bale barriers may be ineffective or cause problems:

1. When improperly placed and installed (such as staking the bales directly to the ground with no soil seal or entrenchment), hay bales allow undercutting and end flow.
2. When used in streams and drainage ways, high water velocities and volumes destroy or impair their effectiveness.
3. When bales are not inspected and maintained adequately.
4. When hay bale barriers are removed before up-slope areas have been permanently stabilized.
5. When hay bale barriers have not been removed after they have served their usefulness.

6.4 Erosion Control Mix Berms

Composition

Erosion control mix berms are made up of shredded bark, stump grindings, and composted bark. It may be made on a project site if adequate materials are available, however its composition needs to be a well-graded mix of different particle sizes. Wood chips, bark chips, ground construction debris and processed wood cannot make up the organic component of the mix. Be sure to consult with the project environmental inspector regarding the suitability of any erosion control mix material proposed for use.

Installation

Erosion control mix berms are simply placed on the surface of the ground and do not require any soil disturbance. The berm should be located in a similar manner to other sediment control barriers along contour, downslope of disturbed soils. Also similar to other sediment barriers, they should not be placed in areas of concentrated runoff, below culvert outlets, around catch basins, or at the bottom of a large contributing subwatershed. At the toe of shallow slopes less than 20 feet long, at a minimum berms should be 12" high and a minimum of 2 feet wide at their base. For longer or steeper slopes, the berms should be wider to accommodate additional runoff. They are ideal for installation on frozen ground, on shallow to bedrock soils, outcrops of bedrock, and heavily rooted forested areas (i.e., those areas where other barriers are difficult to install).

Erosion control mix can also be placed in a synthetic "sock" to create a contained stable sediment barrier. This is especially useful in areas where trenching is not feasible, such as frozen ground, across pavement, or compacted gravel. When in a sock, erosion control mix can be staked in an area of concentrated flow (i.e., ditch or swale) as the netting prevents movement of the mulch mixture.

Maintenance

As with other barriers, inspection should be performed after each rainfall or daily during prolonged periods of rain. Accumulations of sediment should be removed when they reach half the height of the barrier, and the berms can be reshaped and new material can be added as needed.

Removal

In most cases, erosion control mix berms do not need to be removed. They will continue to function as they decompose, become part of the soil on the site and will naturally revegetate. If synthetic socks are used, the erosion control mix can be emptied from the sock and the socks can be disposed of offsite.

6.5 Temporary Sediment Traps

Temporary sediment traps function to slow or temporarily detain runoff and allow sediment to settle out of the water column prior to runoff leaving a project site. Sediment traps generally consist of natural or manmade depressions. Sediment traps are not designed for high volume or high velocity flows.

Installation

Areas draining to sediment traps should be relatively small. Sediment traps are routinely installed at the discharge end of a water bar or upgradient water diversion to treat runoff. Natural depressions can be used or modified, and small basins can be excavated. Structural erosion control devices can be installed along the downslope perimeter of natural or excavated sediment traps to increase filtration of any runoff that overtops the trap. Sediment traps should discharge to vegetated buffer areas.

Sediment traps may also be constructed using structural erosion controls such as hay bale corrals lined with geotextile fabric. Care should be taken to prevent existing vegetation or obstructions from tearing the fabric and allowing the runoff to escape the fabric untreated.

Maintenance

When sediment has accumulated to 50% of the capacity of the trap it should be removed and placed in an upland area and stabilized in a manner to prevent its entry into protected natural resources. Similarly, non-functioning or damaged geotextile fabric must be removed, disposed of properly and replaced as needed.

Removal

Temporary sediment traps shall be removed, and areas shall be regraded to original contours and stabilized with permanent non-structural controls until fully re-vegetated. All structural controls used to construct temporary sediment traps must be removed and disposed of properly.

6.6 Temporary Sediment Basins

Permanent sediment basins, designed by a qualified engineer, can be used during construction for temporary storage of stormwater and settling of sediments. Sediment basins should be constructed and stabilized prior to the remainder of the site being disturbed. Flow patterns across the site should be directed towards the sediment basin for treatment.

Installation of the sediment basin shall be completed per the design on the engineer-stamped drawings. Following its use as a temporary sediment basin, all collected sediment must be removed and necessary repairs made to allow for the intended permanent function of the engineered design. Sediments removed from the basin must be placed in an upland area and stabilized in a manner to prevent its introduction into protected natural resources.

7.0 NONSTRUCTURAL EROSION CONTROL MEASURES

7.1 Nonstructural Measures Defined

Nonstructural measures are temporary or permanent methods used to cover exposed soil areas to prevent erosion from occurring. Their purpose is to cover whole areas of exposed soil to prevent initial erosion of soil from a construction site.

Examples of nonstructural measures include hay or straw mulch, erosion control mix, matting, or seeding.

7.2 Importance of Nonstructural Measures

Nonstructural measures are important because they provide both temporary and permanent protective cover to exposed soils. Generally, they provide the first line of protection against erosion, and can be the most effective means of preventing erosion. This protection is important because exposed soils are easily eroded by wind or water. Some soils such as silts can easily be removed from a construction site by rainwater. The impact of individual raindrops on exposed soils can loosen soil particles, and these particles can then be carried off the work site by runoff and deposited into water resources including streams, rivers, wetlands, ponds, and lakes. Silt particles don't settle out of water easily, and water siltation can pollute surface waters and harm aquatic creatures such as insects and fish. For example, brook trout, one of Maine's premier game fish species, requires clear, high quality water in order to survive. Silty water can reduce spawning habitat, irritate fish gills, lower oxygen content in water, and make fish susceptible to diseases.

Dry soil conditions and high winds can also cause siltation. When small particle soils such as silts become dry, they have a baby powder-like texture and can easily be swept away by winds. Nonstructural measures help prevent wind erosion because they hold moisture next to the soil, keep the soil from drying out due to wind exposure, and prevent winds from carrying away dry soil particles. Keep in mind, however, that proper construction sequencing is invaluable (See Section 2.3).

7.3 Placement of Nonstructural Measures

Nonstructural measures should be used whenever there is a possibility that exposed soils on a construction site could wash into adjacent sensitive water resources. Temporary nonstructural measures such as hay or straw mulch should be spread on exposed soils within 100-feet of water resources within 48 hours of initial soil disturbance, or before any predicted storm event. There are two types of nonstructural measures: temporary and permanent. Temporary measures are typically used during construction, while permanent measures are usually applied after construction is complete (i.e., restoration). Provided below are general discussions and explanations of the common nonstructural measures that are used on CMP construction sites.

7.3.1 Temporary Measures

- Hay or straw mulch (unanchored on slopes less than 8%, anchored on slopes greater than 8%) on exposed soil areas and soil stockpiles in the construction area.
- Temporary seeding covered by hay or straw mulch on soil stockpiles or areas of exposed soil next to sensitive resources that are not scheduled for final restoration for 30 days (this only applies between the dates of April 16 to October 31 of any given year). Temporary seeding is not required during the Winter Construction Season.
- Erosion control mix can be used as a stand-alone temporary mulch on slopes that are 2 horizontal to 1 vertical, or less, on frozen ground, in forested areas, or at the edge of gravel parking and areas under construction. It should be applied at a thickness of 4 to 6 inches.
- Rolled Erosion Control Products (RECP’s) such as Curlex or Jute matting, can be used on areas of high wind exposure, steep slopes (steeper than 8% grade), unstable soils, and stream/river bank restoration areas. Matting is typically anchored (usually with large staples, as recommended by the manufacturer). Although this type of material is usually used during final restoration, it is considered a temporary measure because it generally deteriorates within two years.

Table 5 Temporary Seeding Rates and Dates				
Seed	Lb./Ac	Seeding Depth	Recommended Seeding Dates	Remarks
Winter Rye	112(2.0 bu)	1-1.5 in.	8/15-10/1	Good for fall seeding. Select a hardy species, such as Aroostook Rye.
Oats	80 (2.5 bu)	1-1.5 in.	4/1-7/1 8/15-9/15	Best for spring seeding. Early fall seeding will die when winter weather moves in, but mulch will provide protection.
Annual Ryegrass	40	.25 in.	4/1-7/1	Grows quickly but is of short duration. Use where appearance is important. With mulch, seeding may be done throughout growing season.
Sudangrass Perennial	40 (1.0 bu) 40 (2.0 bu)	.5-1 in. .25 in.	5/15-8/15 8/15-9/15	Good growth during hot summer periods. Good cover, longer lasting than Annual Ryegrass. Mulching will allow seeding throughout growing season.

Temporary mulch with or without dormant seeding			10/1-4/1	Refer to TEMPORARY MULCHING BMP and/or PERMANENT VEGETATION BMP.
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Proper application rates, location, and seasonal consideration are provided in Table 6 on page 23 of this manual.

7.3.2 Permanent Measures

Uplands

- Permanent grass and legume seeding covered by hay or straw mulch on all areas that have been restored to final grade (this seeding generally applies between the dates of April 16 to October 31 of any given year). This is required to establish permanent, perennial, vegetative cover on exposed soils. Permanent seeding is not required during the Winter Construction Season, although dormant seeding may be performed. (See Section 8.0 for details on winter construction.)
- Seeds covered by anchored (usually with large staples) Curlex or jute matting in areas of high wind exposure, on steep slopes (steeper than 8% grade), unstable soils, and stream/river bank restoration areas.
- The soil may need to be properly prepared before any seeds are placed on the ground. This preparation may include addition of fertilizer (only in designated upland areas not adjacent to, or near waterbodies or wetlands, if in doubt ask the environmental or construction inspector) in areas that have been tested, and are found to be deficient in plant nutrients.
- Erosion control mix can also be used as a permanent mulch to provide a buffer around disturbed areas. It can be left in place to decompose and naturalize. It will eventually support vegetation, which should be promoted. If vegetation is desired in the short-term, legumes and woody vegetation can be planted, which will create additional stability.

Wetlands

- Wetland areas are to be seeded only with resource agency approved wetland seed mixes. If it is decided that wetlands will not be seeded, disturbed wetland will be graded to original contours, mulched with straw, and allowed to revegetate naturally.

As with the Temporary Measures, refer to Table 6 on page 23 for proper application rates, locations, and seasonal considerations.

For permanent seeding mixtures, consult the approved plans/proposal for the project, the environmental inspector, or Appendix A of the Maine Erosion and Sediment Control BMPs.

8.0 WINTER CONSTRUCTION CONSIDERATIONS

If a project is actively being constructed between November 1 and April 15 of any given year, sediment and erosion control guidelines developed by the Maine Department of Environmental Protection for projects occurring during the winter months must be followed.

Proper construction sequencing (Section 2.3) can greatly minimize environmental impact during winter construction. When in doubt, contact the project construction manager or environmental inspector with any questions.

Table 6 on page 23 highlights some of the major differences between the winter construction guidelines and normal BMPs used during construction and for temporary stabilization. The table presents differences for temporary measures that should be used during construction, and permanent measures when construction is completely done.

Table 6
Nonstructural Erosion Control Measures (Seasonal Differences in Construction BMP Requirements)

Dates	General Construction April 16 through October 31 of every year	Winter Construction November 1 through April 15 of every year
Mulch on slopes less than 8%	Within 100-feet of sensitive water resources apply hay and/or straw mulch at a minimum of 70 lbs./1000 square feet of exposed soil (about 2 bales). Must be done within 7 days of initial soil disturbance and before storm forecasted events, unless specified otherwise.	Within 100-feet of sensitive water resources apply and maintain properly anchored hay and/or straw mulch at a minimum of 150 lbs./1000 square feet of exposed soil (about 5 bales) at all times. (double the April 16 – October 31 rate)
Mulch on slopes greater than 8%	Hay or straw mulch can be applied without being anchored, though specific site conditions may require use of anchoring.	Apply mulch as specified above. Properly anchor with Curlex, jute matting, or similar mulch netting on upland slopes exceeding 8% and within 100 feet of streams if no construction activities are anticipated for 7 or more days.
Area of exposed soils allowed at any one time	No restriction on area exposed, but contractor must attempt to minimize amount of exposed soil at any one time, especially next to water resources.	Not more than one (1) acre of exposed (not mulched or otherwise devoid of vegetative cover) soil.
Sediment barriers	A single line of sediment barriers including silt fence, hay bales, or wood waste filter berms must be installed between water resources and disturbed soils.	If soil is frozen, wood waste filter berms or 2 lines of sediment barriers (including hay bales and silt fence) must be placed between water resources and disturbed soils.
Temporary seeding in uplands	If required, apply at the rate specified by the supplier, CMP Environmental Department, or Environmental Inspector. Cover with mulch.	Not required, but if temporary seeding is desired, it must be applied at a rate 3 times higher than the General Construction Season, and covered with mulch.
Temporary seeding in wetlands	Wetlands are not to be seeded unless done so with an agency-approved seed mix. Annual Rye Grass is not acceptable and shall not be used. Disturbed wetland areas will be mulched exclusively with straw.	Wetlands are not to be seeded unless done so with an agency approved seed mix. Annual Rye Grass is not acceptable and shall not be used. Disturbed wetland areas will be mulched exclusively with straw.
Permanent seeding in uplands	Site must be seeded at rate specified by the supplier and covered with hay or straw mulch. If needed, the site can be limed and fertilized.	Not required before April 16, but if dormant seeding is desired, the site should receive an adequate cover of loam, if necessary, be seeded at a rate 3 times higher than the General Construction Season, and covered with mulch at a minimum of 150 lbs./1000 square feet.
Permanent seeding in wetlands	Do not apply permanent seed mixes to wetland areas unless they are specially designated wetland seed mixes approved by a resource agency.	Do not apply permanent seed mixes to wetland areas unless they are specially designated wetland seed mixes approved by a resource agency.
Temporary seedbed preparation	Apply limestone and fertilizer (uplands only) according to soil test data. If soil test is not possible, 10-10-10 fertilizer may be applied at a rate of 600 lbs./acre and limestone at 3 tons/acre.	Not required, but seedbed can be prepared according to General Construction requirements.

Dates	General Construction April 16 through October 31 of every year	Winter Construction November 1 through April 15 of every year
Permanent seedbed preparation	Apply limestone and fertilizer (uplands only) according to soil test data. If soil test is not possible, 10-20-20 fertilizer may be applied at a rate of 800 lbs./acre and limestone at 3 tons/acre.	Not required before April 16, but if dormant seeding is desired, the seedbed can be prepared according to the General Construction requirements.
Temporary slope stabilization	Same as winter construction season, but mulch does not need to be anchored.	Anchored hay or straw mulch on slopes greater than 8% and drainage ways with greater than 3% slope as necessary. Wood waste mix can be used on slopes in place of anchored hay or straw mulch.
Maintenance of erosion controls	Same as winter construction guidelines.	All erosion controls should be inspected periodically to ensure proper function. If any evidence of erosion or sedimentation is evident, repairs should be made to existing controls or other methods should be used.
Inspection and monitoring	Monitoring should be performed as needed until a new, healthy vegetative cover is attained on the site. This applies to both temporary and permanent seeding.	Monitoring should be performed as needed to ensure proper stabilization and re-vegetation (both temporary and permanent). Starting in the spring following completion of the project, inspections should be performed until new, healthy vegetative cover is attained.

9.0 SITE RESTORATION STANDARDS

Following completion of the construction work, the contractor will be responsible for conducting site restoration work. The following guidelines will apply to all activities, including temporary and permanent roads, stream/wetland crossings, staging and work areas, and substation sites.

9.1 Procedure

At the completion of project construction in an area or at the end of the construction, CMP or their designated representative, the contractor, and any Third Party Inspector will review the project's restoration needs and prioritize the areas. This prioritization should consider time of year, ground conditions, re-vegetation probabilities, and equipment availability. A restoration "walk-through" is strongly recommended.

In many cases a site can and should be restored within hours of when the soil disturbance occurred. Often getting the equipment to a site that needs to be restored only creates more disturbed area to restore. It is important to "restore as you go" to reduce the equipment travel on temporary access roads. It can be particularly difficult to restore an area that was disturbed during winter construction activities in the spring or summer.

Likely areas of restoration include, but are not limited to:

- Around substation construction areas.
- Around pole and anchor pole placement.
- All wetland, stream, or brook crossings, particularly the approaches and any stream banks.
- Drainage ways or ditches.
- All temporary or permanent constructed roads, yarding, and staging areas.
- Cut banks.
- Steep slopes (over 8%).

9.2 Methods for Restoration

There are several methods of restoration for different areas.

1. All soil that is excavated, mounded, or deposited during construction will be re-graded or removed from the site as directed by CMP. All re-grading and redistribution of soil will be done to match existing grade.
2. The banks and bottoms of brooks, streams, and rivers will be restored to natural conditions. In general, any material or structure used at temporary crossings will be removed, and the bank and bottoms restored to their original depth and contour.
3. On permanent access roads, stream culverts and bridges will be left intact and in good repair to remain available for maintenance operations and/or public access (woods roads, camp roads, etc.).
4. On those construction roads to be closed to future vehicle traffic (as determined by CMP), bridges, culverts, and other temporary crossing or water diversion structures will be removed and the banks and bottoms restored to original conditions.

5. Previously installed water bars may remain or new ones will be installed at locations designated by CMP or their designated representative. To prevent accelerated soil erosion, such water bars will be installed on all access and construction roads to be closed to vehicle traffic and on steep sections of permanent roads. Permanent water bars will be constructed to a sufficient height and width to divert the amount of water anticipated at each location as well as to provide some post-project permanence to the site. Water bars on long-term temporary access roads will be constructed in such a manner that they will remain effective and require minimal maintenance, and will be permanently seeded to ensure their long-term stability.
6. All areas severely rutted by construction equipment will be re-graded and permanently revegetated.
7. Upon completion of the project, all disturbed areas will be permanently revegetated or otherwise permanently stabilized. This includes the restoration of all areas disturbed by pole installation, temporary access roadways, permanent access roadways, substation construction, and resource crossings. Restoration is generally assumed to be a well-established vegetative cover. All cut and fill slopes must be revegetated, stabilized with riprap, or stabilized with erosion control mix, as appropriate to the slope conditions.
8. Liming, fertilizing, and seeding requirements for permanent re-vegetation will depend upon the soil type and drainage condition of the site. In the absence of soil tests, permanent seeding will generally be done in accordance with "Procedures for Permanent Seeding for Erosion Control" found in Table 6 on page 23.
9. The contractor will be responsible for the proper maintenance of all revegetated areas until the project has been completed and accepted. Where seed areas have become eroded or damaged by construction operations, the affected areas will be promptly re-graded, limed, fertilized, and re-seeded as originally required.
10. The contractor will perform all erosion control work to the complete satisfaction of Central Maine Power Company before the work is accepted. Central Maine Power Company will base acceptance of the erosion control and stabilization work on a final inspection.

APPENDIX A
DEFINITION OF TERMS

APPENDIX A

DEFINITION OF TERMS

Adjacent to a natural resource: Within 75 feet of, or in a position to wash into, a water resource (river, stream, brook, pond, wetland, or tidal area).

Annual seed mix: Seed mixture largely made up of plants that only persist one growing season.

Brook: Essentially the same as a stream, a water course that has a defined channel, a gravel, sand, rock or clay base, and flows at least part of the year. It may be a dry channel part of the year.

Corduroy: Logs greater than 3 inches in diameter at the small end and at least 18 feet long that are placed perpendicular to travel direction, on approaches to and in wetlands for crossings. The purpose of the logs is to prevent rutting and preserve vegetation root integrity in and adjacent to wetland areas. May also be used on approaches to mats or bridge stream crossings.

Crossing: Any activity extending from one side to the opposite side of a sensitive natural resource whether under, through, or over that resource. Such activities include, but are not limited to, roads, fords, bridges, culverts, utility lines, water lines, sewer lines, and cables, as well as maintenance work on these crossings. Crossings should be done to minimize impact. For example, crossing at a right angle to the resource and finding the driest or narrowest spot is one method for minimizing impact.

Cross-sectional area: The cross-sectional area of a stream channel is determined by multiplying the stream channel width by the average stream channel depth. The stream channel width is the straight-line distance from the normal high water line on one side of the channel to the normal high water line on the opposite side of the channel. The average stream channel depth is the average of the vertical distances from a straight line between the normal high water marks of the stream channel to the bottom of the channel.

Culvert: A pipe or box structure of wood, metal, plastic, or concrete used to convey water.

Erosion: Movement of earthen material by water or wind.

Erosion control blanket (matting): Manufactured material made out of natural or synthetic fiber designed to control movement of earthen material when installed properly.

Erosion control mix: Erosion control mix consists primarily of organic materials such as shredded bark, wood chips, stump grindings, composted bark, or similar materials. Ground construction debris or reprocessed wood products are not acceptable for use in erosion control mix. It contains a well-graded mix of particle sizes and may contain rocks up to 4 inches in diameter. Properly manufactured mix will have organic matter content between 80 and 100 percent (dry weight), 100 percent of particles must pass a 6-inch screen, the organic portion needs to be fibrous and elongated, it may contain only small proportions of silts, clays, or fine sand, and its pH should be between 5.0 and 8.0. Its applications include erosion control berms and mulch.

Erosion control plans: Written guidelines specific to a project or activity, describing various techniques and methods to control erosion for specific construction activities.

Fill: Any earth, rock, gravel, sand, silt, clay, peat, or debris that is put into or upon, supplied to, or allowed to enter a water body or wetland. Material, other than structures, placed in or adjacent to a water body or wetland.

Filter strip: Undisturbed areas of ground consisting of natural vegetation and natural litter such as leaves, brush, and branches, located between a water resource and access road, skid road or trail, or other area of disturbed soil.

Ford: A permanent crossing of a stream utilizing an area of existing, non-erodible substrate of the stream, such as ledge or cobble, or by placing non-erodible material such as stone or geotextile on the stream bottom.

Geotextile, Non-woven: Synthetic material made of spun polypropylene fiber used to support wetland fill or stabilize soils.

Geotextile, Woven: Synthetic material of woven polypropylene used to stabilize soils and make sediment barriers (silt fence).

Great pond: An inland water body which in a natural state has a surface area in excess of 10 acres, and any inland water body which is artificially formed or increased which has a surface area in excess of 30 acres.

Intermittent watercourse: Water course that has water in it only part of the year. It is still considered a natural resource.

Mats: Pre-constructed, portable, timber platforms used to support equipment or travel in or over wetlands or water bodies.

Mulch: Temporary erosion control such as hay, bark, or some similar natural material utilized to stabilize disturbed soil.

Perennial seed mix: Seed mixture made up of seeds from plants that persist for several years.

Perennial watercourse: A river, stream, or brook depicted as a solid blue line on the most recent edition of a United States Geological Survey 7.5 minute series topographic map.

Typically has water in it year round.

Permanent access road: Project access road that is not restored after project construction completion. Permanent access roads should be designed and constructed so they are not an erosion problem.

Permanent stabilization: Establishment of a permanent vegetative cover on exposed soils where perennial vegetation is needed for long-term protection.

Permanent vegetative cover: Perennial seed stock, including but not limited to grasses and legumes that persist for more than several growing seasons.

Protected Natural Resource: Coastal sand dune system, coastal wetlands, significant wildlife habitat, fragile mountain areas, freshwater wetlands, community public water system primary protection areas, great ponds or rivers, streams, or brooks. (From the Maine Natural Resources Protection Act, 38 M.R.S.A. Section 480-B., revised 2007).

Riprap: Heavy, irregular-shaped rocks that are fit into place, usually without mortar, on a slope in order to stabilize and prevent soil erosion.

Sediment barrier: Staked hay bales, silt fence, or similar materials placed in a manner to intercept silt and sediment laden water runoff.

Sedimentation: Deposition of earthen material in a water body or wetland.

Sensitive Natural Resource: Area that deserves special attention because it is significant wildlife habitat, fisheries habitat, or has other natural resource values. These areas may require the use of minimum impact construction techniques such as use of mats, leaving vegetation intact for buffers, special timing of construction, or other specific techniques.

Settling basin (sediment/catch basin): Excavated pit placed to intercept water running off disturbed soils or dirt road bed. Usually used only where filter strip is inadequate to protect a stream, pond, or wetland from silt and sediment.

Silt fence: Woven geotextile sediment barrier. Proper installation requires placement on-contour and keying the fabric in at ground level.

Steep slopes: Slopes in excess of eight (8) percent.

Stone check dam: A small, temporary dam constructed across a swale or drainage ditch. The purpose is to reduce the velocity of concentrated flows, reducing erosion and trapping sediment generated in the ditch.

Stream: Generally, a channel between defined banks with a gravel, sand, rock, or clay base that flows at least part of the year. It may be a dry channel part of the year. The Maine Natural Resources Protection Act contains a more detailed definition.

Structure: Anything built for the support, shelter, or enclosure of persons, animals, goods, or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines, and roads.

Temporary access road: A road constructed solely for project access which is restored to original grade upon project completion, if not sooner. All areas disturbed by access road construction and use will be stabilized, including road ditches, travel ways, and slopes back to vegetated conditions. In most cases, any roadway ditches associated with temporary access roads should be refilled to reestablish pre-development drainage conditions.

Temporary stabilization: Mulch, matting, or seed, or a combination thereof, utilized to stabilize soil. Soil stockpiles left in place longer than 14 days must have temporary stabilization.

Temporary vegetative cover: An annual seed mixture, typically annual rye and oats.

Topography: The contour and elevation of the surface of the ground.

Turn out: Water diversion that directs water out of a ditch or off a travel-way and into a vegetated buffer.

Upland edge: The area of uplands alongside a wetland, stream, or water body.

Wastes requiring special handling: Wastes generated from construction activity including engine oil, hydraulic oil, gear oil, diesel, gasoline, or coolants.

Water bar: Constructed bar across an access road or skid trail that directs surface water off the road or trail into a stable vegetated surface or filter strip. They are used as a temporary measure on active roads or when closing roads permanently to prevent erosion.

Water body: River, stream, brook, pond, wetland, or tidal area.

Water resource: River, stream, brook, pond, wetland, or tidal area.

Wetland: An area that is inundated or saturated by surface or groundwater at a frequency and for a duration sufficient to support, and which under normal circumstance do support, a prevalence of wetland vegetation typically adapted for life in saturated soils. The Maine Natural Resources Protection Act contains a more detailed definition.

APPENDIX B
CONSTRUCTION MATERIALS SOURCE LIST

APPENDIX B
CONSTRUCTION MATERIALS SOURCE LIST

The following list of vendors has been selected given the wide variety of construction materials they offer. The list is not meant to be all-inclusive or an indication of favored vendors.

W.H. Shurtleff Company (Culverts, Geotextiles)

One Runway Road
Suite 8
South Portland, Maine 04106-6169
1-800-633-6149
www.whshurtleff.com

A. H. Harris (Geotextiles, i.e. Curlex Excelsior Blankets)

22 Leighton Road Augusta, Maine 04332 (207) 622-0821 www.ahharris.com	585 Riverside Street Portland, Maine 04103 (207) 775-5764
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North American Green (Erosion control materials)

Maine Distributor:
E.J. Prescott
P.O. Box 600
32 Prescott Street, Libby Hill Business Park
Gardiner, Maine 04345
(207) 582-1851
www.ejprescott.com

New England Organics (Erosion Control Mulch)

135 Presumpscot Street, Unit 1
Portland, ME 04103
1-800-933-6474
www.newenglandorganics.com

APPENDIX C
OTHER RECOMMENDED REFERENCE
MANUALS

APPENDIX C**OTHER RECOMMENDED REFERENCE MANUALS**

Maine Erosion and Sediment Control Best Management Practices (BMPs). Manual for Designers and Engineers. Bureau of Land Resources, Maine Department of Environmental Protection, Augusta, Maine. October 2016.

http://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_engineers.pdf

Maine Erosion and Sediment Control Practices Field Guide for Contractors. Bureau of Land Resources, Maine Department of Environmental Protection, Augusta, Maine. 2014.

http://www.maine.gov/dep/land/erosion/escbmps/esc_bmp_field.pdf

Best Management Practices for Forestry: Protecting Maine's Water Quality. Maine Forest Service, Augusta, Maine. 2004.

www.maine.gov/doc/mfs/pubs/bmp_manual.htm

Forest Transportation Systems: Roads and Structures Manual. Seven Islands Land Company, Bangor, Maine. Third Edition, 1999.

APPENDIX D
CONSTRUCTION TECHNIQUE ILLUSTRATIONS

CULVERT CROSSING**IMPROPER INSTALLATION**

- Culvert is undersized, allowing overflow to cross travel-way
 - Insufficient cover thickness over culvert
 - Outlet is not stable, leading to erosion
- Culvert outlet is set too high causing it to be impassable to fish and other aquatic organisms

**PROPER INSTALLATION**

- Culvert is adequately sized for flow
- Sufficient cover thickness over culvert
- Inlet and outlet are adequately supported by gravel and rock to protect and maintain stability
- Outlet is properly seated at or below stream bottom allowing aquatic organisms to access upstream

CRANE MATS – WATERBODY CROSSING**IMPROPER INSTALLATION**

- Mats not long enough to keep equipment out of water and wetland soils
 - Lacks cross supports which elevate travel mat
- Mats do not extend far enough to protect wetland soils from rutting

**PROPER INSTALLATION**

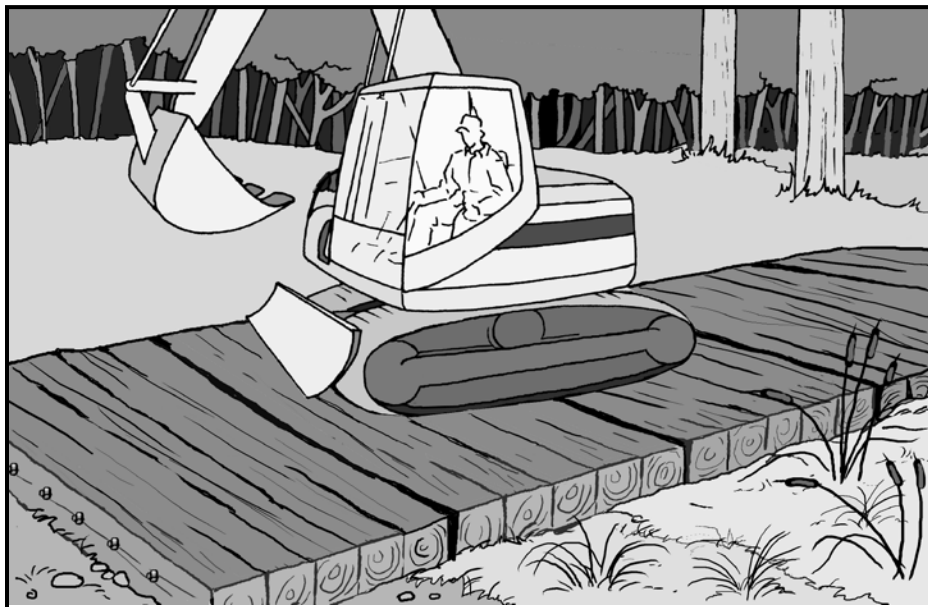
- Mats are elevated by cross-supports on stream banks, keeping them up out of water and out of wet soils
 - Water flows under mats
- Mats extend over approaches to crossing protecting soils from rutting and eroding
 - Equipment stays out of water and wetlands

CRANE MATS – WETLAND CROSSING



IMPROPER INSTALLATION

- Long axis of mats is not perpendicular to travel direction
- Mats are working down into wetland causing significant disturbance and picking up mud
 - Mats do not extend beyond wetland edge to solid ground

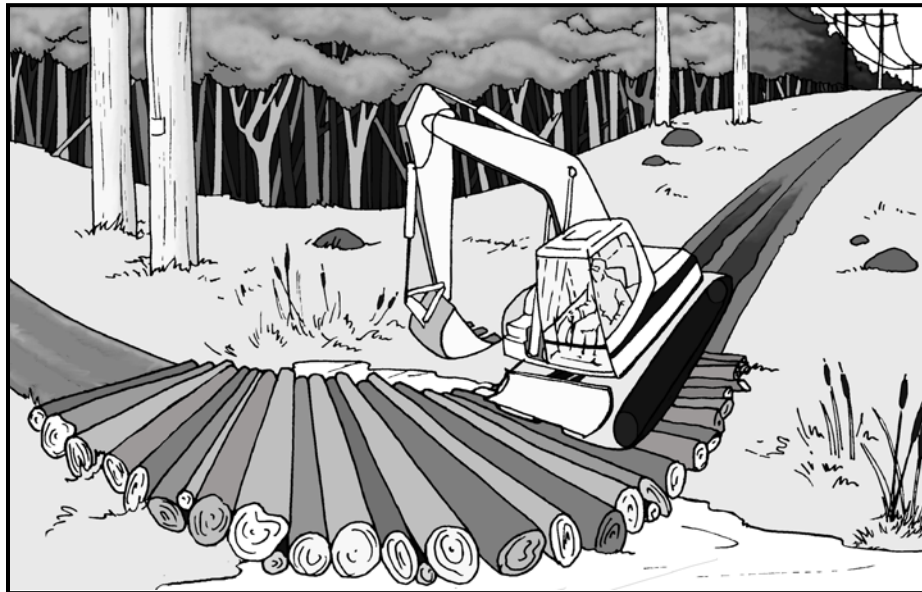


PROPER INSTALLATION

- Correct orientation relative to travel direction
- Entire wetland is spanned, preventing rutting at ends of crossing

CORDUROY CROSSING**IMPROPER INSTALLATION**

- Insufficient corduroy to support equipment
 - Corduroy is sunken into wetland soil
- Approaches are steep, rutted, and are not protected with additional corduroy or slash
 - Flow is interrupted, and water is soiled with mud and silt

**PROPER INSTALLATION**

- Adequate amount of layered corduroy to protect soil from rutting
- Approaches are protected from rutting by extension of corduroy beyond edges of crossing
 - Flow is maintained and water is clear of mud and silt

WATER BARS



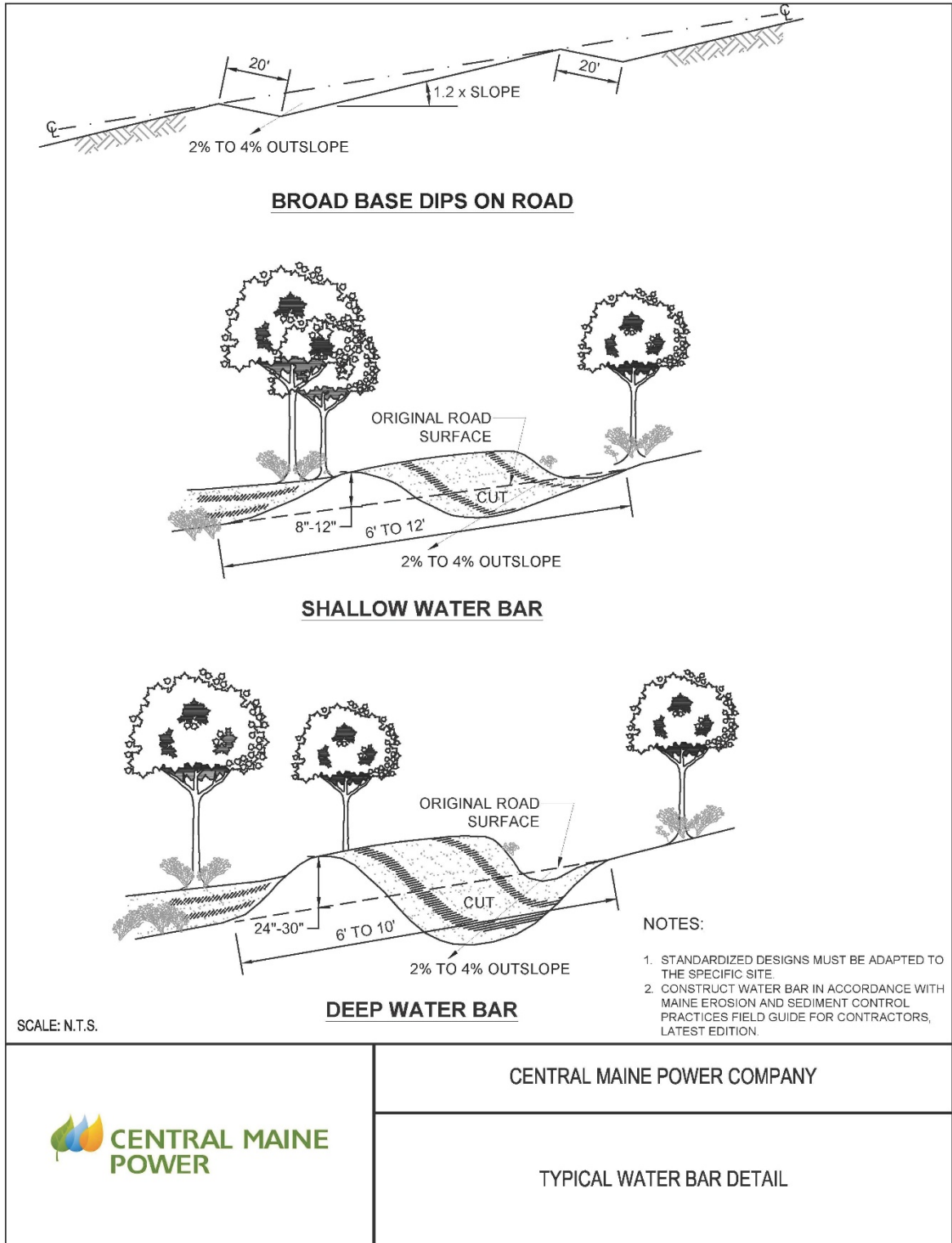
IMPROPER INSTALLATION

- Flow directed to uphill side on upper bar
 - Angle of lower bar is too shallow
- Lower bar does not extend far enough, allowing water to escape around ends
 - Bars are not high enough, allowing water to flow over top, eroding them



PROPER INSTALLATION

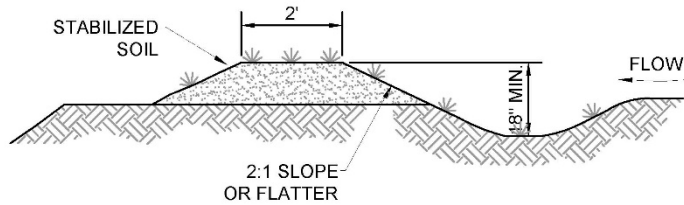
- Bars are at moderate angles
 - There are enough bars to divert all water flowing down road
 - Bars are high enough to prevent water from flowing over them
- Bars extend beyond edges of road, preventing water from flowing around them



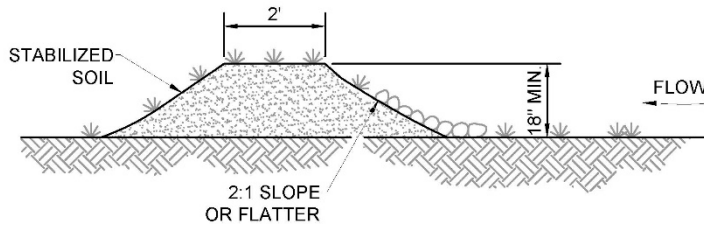
UPGRADIENT RUNOFF DIVERSION

NOTES:

1. ANGLE DIVERSION AWAY FROM SLOPE, WITH A 2-3% DOWNWARD GRADIENT.
2. DIVERSION SHALL DISCHARGE DIRECTLY TO EITHER A PLUNGE POOL, LEVEL SPREADER OR OTHER ENERGY DISSIPATER.
3. STABILIZE WITH MATERIAL THAT IS APPROPRIATE FOR THE SLOPE AND EXPECTED RUNOFF (EROSION CONTROL BLANKETS, GRAVEL OR RIPRAP).
4. CONSTRUCT DIVERSION IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS, LATEST EDITION.



DIVERSION WITH EXCAVATION
SCALE: N.T.S.



DIVERSION WITH FILL
SCALE: N.T.S.

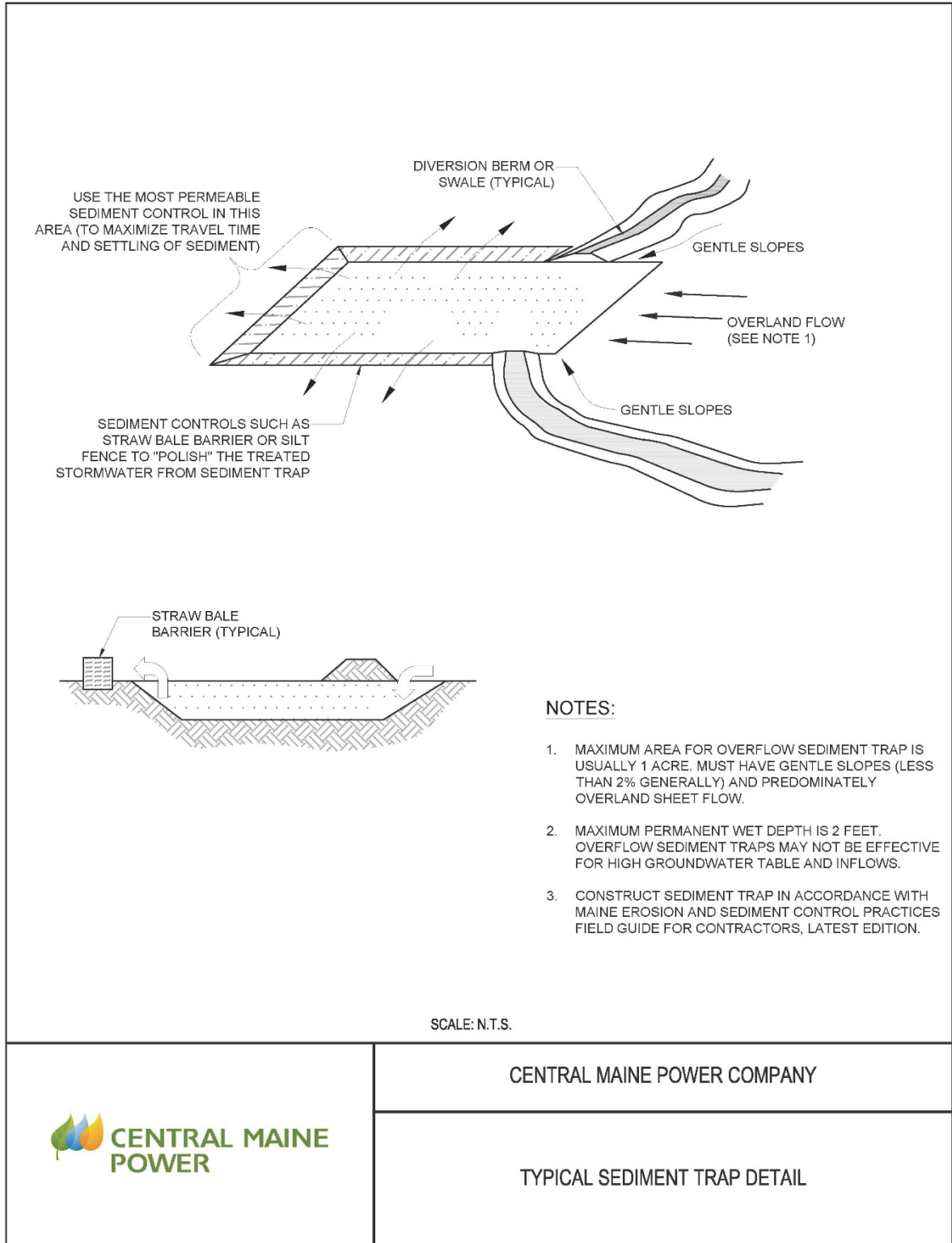


**CENTRAL MAINE
POWER**

CENTRAL MAINE POWER COMPANY

TYPICAL UPGRADIENT RUNOFF DIVERSION DETAIL

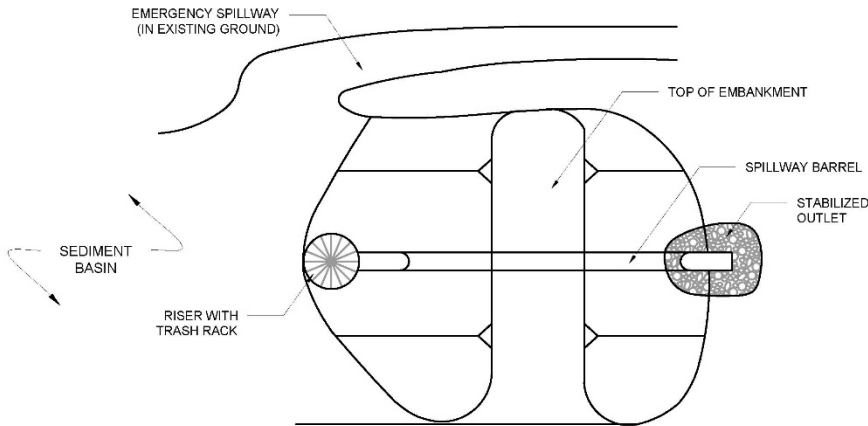
TEMPORARY SEDIMENT TRAP



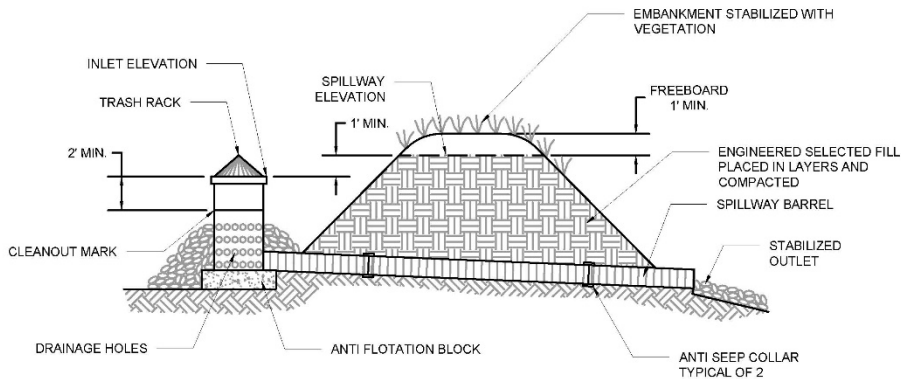
TEMPORARY SEDIMENT BASIN

NOTES:

1. THE BASIN'S LENGTH TO WIDTH RATIO SHALL BE 2:1 OR FLATTER.
2. BASIN SHALL BE LOCATED MORE THAN 100 FEET AWAY FROM ANY MAPPED OR DELINEATED NATURAL RESOURCE AND SHALL NOT DIRECTLY DISCHARGE TO A STREAM.
3. STABILIZE BASIN WITHIN 7 CALENDAR DAYS WITH RIPRAP, EROSION CONTROL MIX OR AN ANCHORED EROSION CONTROL BLANKET.
4. CONSTRUCT BASIN IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS, LATEST EDITION.



PLAN
SCALE: N.T.S.



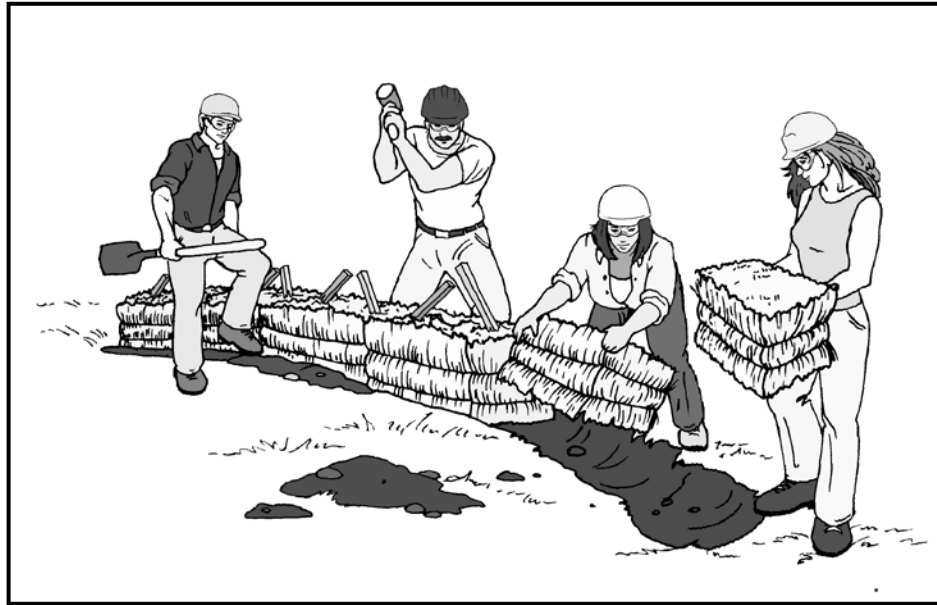
SECTION
SCALE: N.T.S.



CENTRAL MAINE POWER COMPANY

TYPICAL SEDIMENT BASIN DETAIL

SEDIMENT BARRIER – HAY BALES
PROPER INSTALLATION

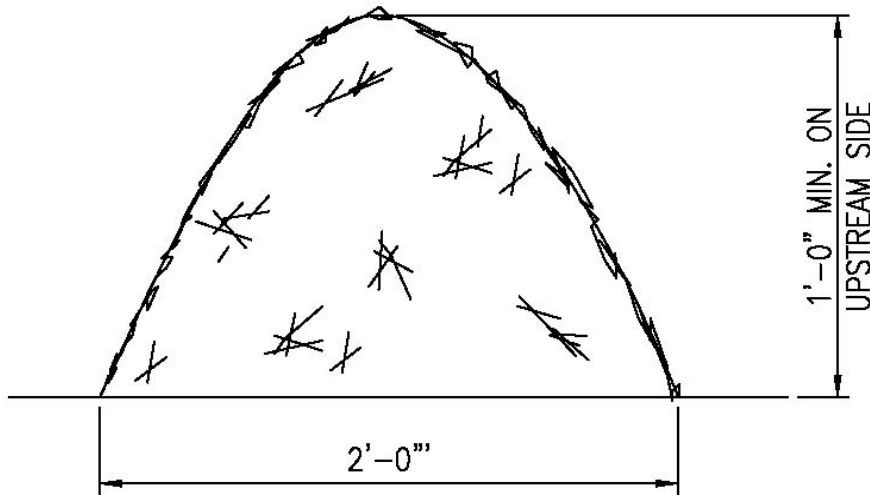


- Dug trench to key bales into ground
- Stakes placed and driven in at angles to snug bales together
 - Excess dirt used to cover openings and cracks

SEDIMENT BARRIER – SILT FENCE
PROPER INSTALLATION



- Dug trench to key material into ground
 - Stakes are placed facing away from disturbed area
- Excess material on bottom is buried with excess dirt to prevent water from flowing under fence

EROSION CONTROL MIX BERM DETAIL

- Use erosion control mix berm in place of silt fence and/or hay bale sediment barriers
- Erosion control soil/bark mix shall consist of: shredded bark, stump grindings, composted bark or flume grit and fragmented wood generated from water-flume log handling systems. The mix shall conform to the following:
 1. pH: 5.0 to 8.0
 2. Screen Size: 6" – 100% passing
¾" – 70% to 85% passing
Mix shall not contain large portions of silts, clays or fine sands
 3. Organic material: 20% - 100% (dry weight basis)
Organic portion must be fibrous and elongated
 4. Soluble salts shall be <4.0 mmhos/cm

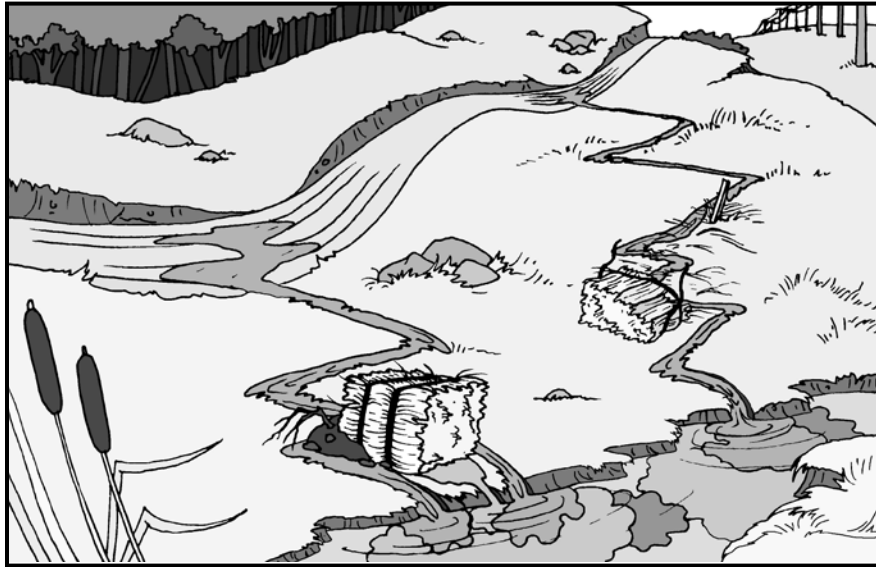
SEDIMENT BARRIER – SILT FENCE**IMPROPER INSTALLATION**

- Fence located too far from road and too close to resource
 - Stakes installed on wrong side of fence
- Needs maintenance (restaking, restapling, or even replacement)
 - Placed in concentrated flow

**PROPER INSTALLATION**

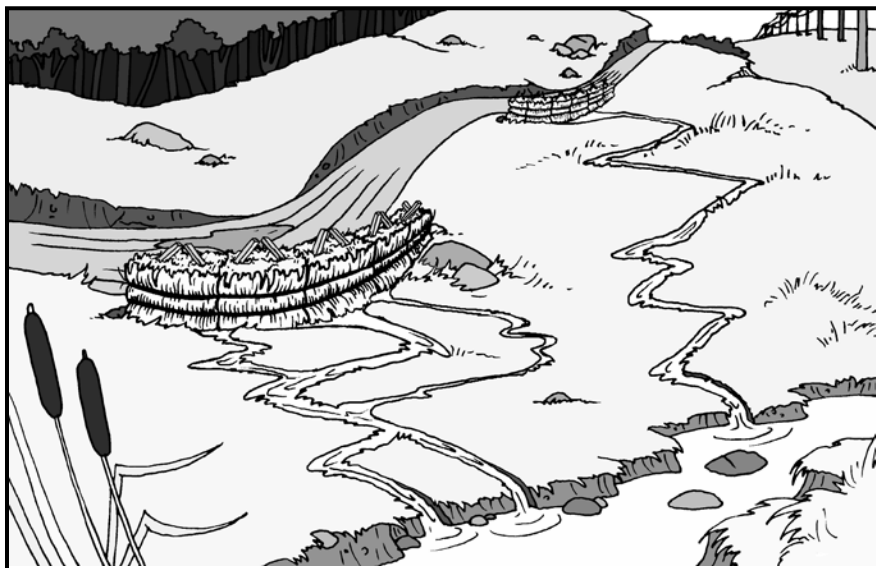
- Adequate distance from road and resource allows road to capture and slow water, and allows silt fence to filter it before reaching resource
 - Stakes placed on correct side; facing resource, while filter fabric faces disturbed area
- Adequate length; fence is long enough and turned uphill at ends to prevent water from escaping around edges

SEDIMENT BARRIER – HAY BALES



IMPROPER INSTALLATION

- Placed in concentrated flow
 - Hay bales are not staked
- Not enough hay bales to adequately capture and slow flow
 - Too far from source of runoff and sediment
- Improper orientation of bales; horizontal grass fibers do not provide adequate filtration, and strings on ground rot and bales to fall apart



PROPER INSTALLATION

- Staked properly; bales are secure and snug to one another
- Sufficient number of bales to slow flow and insure that no water escapes around edges
- Positioned close to disturbance, and far from resource to allow proper filtration
 - Vertical orientation of grass fibers provides adequate filtration
 - Placed along contour to capture sheet flow

APPENDIX E

EROSION AND SEDIMENTATION CONTROL LAW* 38

M.R.S.A. § 420-C

APPENDIX E**EROSION AND SEDIMENTATION CONTROL LAW*****38 M.R.S.A. § 420-C**

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in section 480-B. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken and the site must be maintained to prevent unreasonable erosion and sedimentation.

This section applies to a project or any portion of a project located within and organized area of this State. This section does not apply to agriculture fields. Forest management activities, including associated road construction or maintenance, conducted in accordance with applicable standards of the Maine Land Use Regulation Commission, are deemed to comply with this section. This section may not be construed to limit a municipality's authority under home rule to adopt ordinances containing stricter standards than those contained in this section.

* The Erosion and Sedimentation Control Law is administered by the Maine Department of Environmental Protection (MDEP), Augusta, Maine. Please contact the MDEP with specific questions regarding this law.

APPENDIX F
MAINE SLASH LAW* 12 M.R.S.A. § 9333

APPENDIX F**MAINE SLASH LAW*****12 M.R.S.A § 9333***§9333. Disposal along railroad and utility lines*

1. **Stumpage owner.** *A stumpage owner, operator, landowner or agent who cuts or causes or permits to be cut any forest growth on lands that are within or border the right-of-way of a railroad, a pipeline, or an electric power, telegraph, telephone or cable line may not place slash or allow it to remain on the ground within the right-of-way or within 25 feet of the nearer side of the right-of-way.*

2. **Construction.** *Slash accumulated by the construction and maintenance of a railroad, a highway, a pipeline or electric power, telegraph, telephone or cable line may not be left on the ground but must be hauled away, burned or chipped. Slash may not be left or place within the right-of-way or within 25 feet of the nearer side of the right-of-way. If a burning permit is denied or revoked under this chapter, the director may allow logs that are too large to be chipped to remain in the right-of-way until the director determines that their removal is economically feasible.*

3. **Utility line maintenance.** *Slash accumulated by the periodic maintenance of a pipeline or an electric power, telegraph, telephone or cable line may be disposed of in the following manner.*

- A. *Slash with a diameter of 3 inches or less may be left in piles on the ground within the maintained portion of the right-of-way. A pile may not be higher than 18 inches from the ground or longer than 50 feet and must be separated from other piles by a minimum of 25 feet in every direction. A buffer strip with a minimum width of 10% of the total width of the maintained right-of-way must be kept totally free of slash with a diameter of 3 inches or less.*
- B. *Slash with a diameter of more than 3 inches must be removed, chipped or limbed and placed on the ground surface. The pieces must be separated and may not be piled one piece over another. Slash of this size may be left within the maintained buffer strips.*
- C. *If a utility line right-of-way is adjacent to a road, slash that is 3 inches or less in diameter must be removed, burned or chipped. Slash with a diameter of more than 3 inches may be left on the ground within the right-of-way and must not be limbed and separated and may not be piled one piece over another. Usable timber products generated from the maintenance of a utility right-of-way may be piled within the right-of-way but must be removed within 30 days.*

* Note that this is an excerpt from the full text of the law. Please contact the Maine Forest Service, Augusta, Maine, for the full text of the law or with specific questions regarding the Slash Law.

APPENDIX G
CULVERT SIZES FOR STREAM CROSSINGS
(3X RULE)

CULVERT SIZES (ROUND) FOR STREAM CROSSINGS (3x RULE)

AVERAGE STREAM WIDTH

Take two measurements across the stream from bank to bank where you intend to place the culvert. Measurements should be taken at the normal high water line (NHWL). To find the NHWL during low flow periods look for water stains on rocks or a debris line along the bank. Add the first measurement to the second and divide this number by 2. This equals the average stream width.

Example: 36in. + 47 in. = 83in. 83÷2 = avg. stream width of 41.5 inches. (Round up to 42in.)

AVERAGE STREAM DEPTH

Take 3 measurements from the bottom of the stream to the NHWL.

Add the measurements together and divide this number by 3. This equals the avg. stream depth.

Example: 12in. + 16in. + 14in. = 42in. 42÷3 = average stream depth of 14 inches.

USING THE TABLE

Take the average width and depth figures and determine where they intersect on the table above.

*For example, for an average stream width of 42 inches (on the left side of the table), and an average stream depth of 14 inches (along the top of the table), the intersect shows a culvert diameter of 48 inches.

Average Stream Width		Average Stream Depth (Inches)														
Feet	Inches	2	4	6	8	10	12	14*	16	18	20	22	24	26	28	30
1	12	12	15	18	21	21	24	30	30	30	30	36	36	36	36	42
1.5	18	12	18	21	24	30	30	36	36	36	42	42	42	42	48	48
2	24	15	21	24	30	30	36	36	42	42	48	48	48	54	54	54
2.5	30	15	21	30	30	36	42	42	48	48	48	54	54	60	60	60
3	36	18	24	30	36	42	42	48	48	54	54	60	60	60	66	66
3.5	42*	18	30	36	36	42	48	48	54	54	60	60	66	66	72	72
4	48	21	30	36	42	48	48	54	54	60	66	66	66	72	72	78
4.5	54	21	30	36	42	48	54	54	60	66	66	72	72	78	78	84
5	60	21	30	42	48	48	54	60	66	66	72	72	78	78	84	84
5.5	66	24	36	42	48	54	60	60	66	72	72	78	78	84	84	90
6	72	24	36	42	48	54	60	66	66	72	78	78	84	90	90	96
6.0	78	24	36	42	54	60	60	66	72	78	78	84	90	90	96	96
7	84	30	36	48	54	60	66	72	72	78	84	84	90	96	96	102
7.5	90	30	42	48	54	60	66	72	78	84	84	90	96	96	102	102
8	96	30	42	48	54	66	66	72	78	84	90	90	96	102	102	108
8.5	102	30	42	48	60	66	72	78	84	84	90	96	102	102	108	108
9	108	30	42	54	60	66	72	78	84	90	96	96	102	108	108	114
9.5	114	30	42	54	60	66	72	78	84	90	96	102	102	108	114	114
10	120	30	48	54	66	72	78	84	90	96	96	102	108	114	114	120
10.5	126	36	48	54	66	72	78	84	90	96	102	108	108	114	120	120
11	132	36	48	60	66	72	78	84	90	96	102	108	114	114	120	126
11.5	138	36	48	60	66	78	84	90	96	102	108	108	114	120	126	126
12	144	36	48	60	66	78	84	90	96	102	108	114	120	120	126	132
12.5	150	36	48	60	72	78	84	90	96	102	108	114	120	126	132	132
13	156	36	54	60	72	78	90	96	102	108	114	114	120	126	132	138
13.5	162	36	54	66	72	84	90	96	102	108	114	120	126	132	132	138
14	168	36	54	66	72	84	90	96	102	108	114	120	126	132	138	144
14.5	174	36	54	66	78	84	90	96	108	114	120	126	126	132	138	144
15	180	42	54	66	78	84	96	102	108	114	120	126	132	138	144	144

EXHIBIT 8 ENVIRONMENTAL CONTROL REQUIREMENTS

**ENVIRONMENTAL CONTROL REQUIREMENTS
FOR CENTRAL MAINE POWER COMPANY CONTRACTORS & SUBCONTRACTORS
OIL, HAZARDOUS MATERIALS, AND WASTE
*February 2017***

Following are requirements for the proper management of oil, hazardous materials, and waste, by contractors and subcontractors of Central Maine Power Company (CMP). All contractors and subcontractors are required to comply with these requirements while working for or on behalf of CMP.

Failure to abide by these requirements may constitute grounds for termination of contractor/subcontractor services.

General Requirements

- Contractors/subcontractors will manage, store, transport, and use oil, hazardous materials, and wastes in accordance with all applicable local, state, and federal laws and regulations, and consistent with these requirements.
- At a minimum, contractors/subcontractors will follow best management practices when storing, transporting or using oil, hazardous materials, and wastes.
- At all times contractors/subcontractors will take care not to cause a spill or release of oil or hazardous materials to the environment.
- Contractors/subcontractors will provide and maintain on-site, sufficient spill cleanup and containment supplies (absorbent pads, containment booms, protective clothing/PPE, debris containers, etc.) to facilitate the proper control, cleanup and packaging of releases of oil, hazardous materials, or wastes.
- Contractors/subcontractors will remove all oils, hazardous materials, wastes and unused materials from the work site at the completion of the job. This includes full and partial waste material containers such as, but not limited to, rags, gloves, trash, scrap material, and empty containers.

NOTE: If large quantities of oil or hazardous materials are involved, written agreements with emergency response contractors may be required.

Storage and Handling Requirements

- Contractors/subcontractors will store only the minimal amount of oil and hazardous material (at each work site) necessary to complete the work.

- Handling and application of pesticides and herbicides will comply with all regulations adopted pursuant to the Maine Pesticide Control Act of 1975, as amended, Title 7 M.R.S., Section 601.
- Oil, hazardous materials and waste materials will be stored in D.O.T. approved containers or approved tanks in areas not considered to be environmentally sensitive.
- Oil, hazardous materials, and waste containers will be kept closed at all times unless material is being transferred.
- Contractors/subcontractors will ensure that all oil, hazardous materials, and waste transfer operations are supervised.
- Oil, hazardous material, and waste containers will not be stored on the ground, but will be stored in a cabinet or on a firm working surface such as a portable trailer bed or other secure decking.
- If at any time a contractor/subcontractor needs to store oil (including but not limited to fuel oil, petroleum products, sludge, or oil refuse) in excess of a total of 1,320 gallons (excluding containers with a capacity less than 55 gallons) at a CMP construction site, U.S. Environmental Protection Agency (USEPA) oil pollution prevention requirements, as well as CMP policies and procedures, must be met. Specifically, a site-specific Spill Prevention, Control, and Countermeasure (SPCC) plan will be developed for the site, and this SPCC Plan will be implemented should any spills occur.
- Storage and handling of flammable and combustible liquids, including gasoline and diesel fuel, will be in accordance with rules adopted pursuant to Title 25 M.R.S. Section 2441 (Fire Prevention and Fire Protection), as amended (See also Code of Maine Rules 16-219 Chapter 317). These regulations include, but are not limited to, requirements relating to bonding and grounding during transfer operations, fire protection, storage quantity limitations, and spacing and location.
- All gasoline and fuel storage tanks must have secondary containment constructed of an impervious material, and must be capable of holding 110% of the capacity of the primary tank.
- Handling and disposal of hazardous wastes will be in accordance with Maine Department of Environmental Protection (DEP) Hazardous Waste Management rules (Chapters 850 through 858) developed pursuant to Title 38 M.R.S. Section 1301 et. seq., and U.S. Environmental Protection Agency regulations (40 CFR 260 through 272). Handling and disposal of waste oil will be in accordance with DEP Waste Oil Management Rules (Chapter 860) and USEPA regulations (40 CFR 279).

Spill Reporting Requirements

- All spill reporting requirements are the responsibility of the contractor/subcontractor. As required by Title 38 M.R.S. Section 543 and DEP regulations (Chapter 600 4.A. and Chapter 800 4.A.(1)), spills of oil or hazardous materials in any amount and under any circumstances must be reported to the Department (1-800-482-0777) within two hours from the time the spill was discovered.
- As required by the Federal Clean Water Act (40 CFR Part 110.4), a discharge of oil "which causes a sheen upon the surface of the water or adjoining shore line or oily sludge deposits beneath the surface of the water" must be reported within 24 hours to the National Response Center (1-800-424-8802).
- The need to report spills of hazardous materials other than oil to the National Response Center, will be determined by the contractor/subcontractor by consulting the CERCLA list of hazardous substances and reportable quantities (40 CFR Table 302.4). Any spills that involve a "reportable quantity" of any hazardous substance must be reported to the National Response Center by the contractor/subcontractor.
- The contractor/subcontractor must also report all spills immediately to CMP.

Spill Cleanup Requirements

- The contractor/subcontractor is responsible to ensure and oversee immediate and complete cleanup of all spills involving oil, hazardous materials, or waste from its equipment.
- The contractor/subcontractor is responsible for all health and safety issues related to the cleanup of oil, hazardous materials, or waste.
- The contractor/subcontractor is responsible for the proper and timely disposal of all resulting spill debris and spill waste, and for restoring the site to its original condition.

EXHIBIT 9 LETTER OF COMMITMENT TO FUND



January 12, 2024

Mr. John Talbot, Chair
Town of Durham Planning Board
630 Hallowell Road
Durham, ME 04222

Re: New England Clean Energy Connect Project
Evidence of Financial Assurance

To Whom It May Concern:

This letter is issued in connection with the New England Clean Energy Connect project (the “NECEC Project”), to demonstrate compliance with Section H [Financial & Technical Ability] of Durham’s Conditional Use application form, which requires, in part, that the applicant provides evidence of financial capacity for the cost of the project and any required compliance measures.

Availability and Commitment of Funds: NECEC Transmission LLC (“NECEC LLC”) is a wholly owned subsidiary of Avangrid Networks, Inc., a Maine corporation (“Avangrid Networks”), and an indirect wholly owned subsidiary of Avangrid, Inc, a New York corporation (“Avangrid”). Central Maine Power Company (“CMP”) is an indirect subsidiary of Avangrid Networks and Avangrid. Avangrid is 81.6% owned by Iberdrola S.A., a leading global investor-owned power and utility company with operations in the United States, Spain, the U.K., Brazil, and Mexico. The remaining 18.4% of Avangrid shares trade on the New York Stock Exchange (NYSE: AGR).

AVANGRID / One City Center, 5th floor, Portland, ME, 04101



Take care of the environment.
Printed in black and white and only if necessary.

Avangrid and Avangrid Networks have committed to provide NECEC LLC the funding needed for NECEC LLC to acquire the project from CMP and for construction and operation of the NECEC Project. This includes, without limitation, funding NECEC LLC's financial obligations with respect to the interconnection of the NECEC Project and construction of any upgrades necessary to permit the interconnection of the NECEC Project in accordance with Section I.3.9 and the Capacity Capability Interconnection Standard of the ISO-NE Open Access Transmission Tariff (the "Network Upgrades"). The Network Upgrades include the NECEC Project work scope and facilities that will be constructed, owned, and operated by CMP, as the interconnecting transmission owner, which are also subject to the DEP Order.

Avangrid will make equity contributions of up to \$1,000,000,000 to Avangrid Networks to fund the corresponding equity contributions that Avangrid Networks will make to NECEC LLC. In addition, Avangrid and NECEC LLC have executed a \$500,000,000 revolving loan agreement, which will provide a source of debt financing to NECEC LLC during the construction phase of the NECEC Project. Furthermore, Avangrid will provide parent guarantees, letters of credit, or other such instruments or collateral support required by NECEC LLC including in connection with certain regulatory obligations, DEP Order conditions, and certain construction agreements.

Avangrid holds credit ratings from S&P (BBB+), Moody's (Baa2), and Fitch (BBB+). As of September 30, 2023, Avangrid had an equity market valuation of approximately \$12 billion, assets of approximately \$42 billion, and outstanding long-term debt of approximately \$10 billion. To support its short-term financing and liquidity needs, Avangrid has a \$2 billion commercial paper program. Avangrid has revolving credit lines totaling \$3.6 billion, of which \$2 billion backstops the commercial paper program and at least \$1.1 billion is dedicated to providing liquidity to its regulated utilities. Avangrid has issued \$4.4 billion in green bonds since 2017, of which \$2.9 billion was raised at the parent level and \$1.5 billion was raised by its utility subsidiaries.

NECEC LLC will cover its operation expenses with the revenue from the seven transmission service agreements dated June 13, 2018, as amended, executed in connection with the NECEC Project (the "TSAs")¹ that CMP will assign to NECEC LLC. Under the terms of the TSAs, during the operating phase, in consideration for providing firm transmission service utilizing the NECEC

¹ Transmission Service Agreement between Central Maine Power Company and Fitchburg Gas and Electric Light Company d/b/a Unitil; Transmission Service Agreement between Central Maine Power Company and Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid; Transmission Service Agreement between Central Maine Power Company and Nstar Electric Company d/b/a Eversource Energy; Transmission Service Agreement (Unitil – 12.317 MW) between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc.; Transmission Service Agreement (National Grid – 498.348 MW) between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc.; Transmission Service Agreement (Eversource Energy – 579.335 MW) between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc.; and Additional Transmission Service Agreement between Central Maine Power Company and H.Q. Energy Services (U.S.) Inc.

AVANGRID / One City Center, 5th floor, Portland, ME, 04101



Take care of the environment.
Printed in black and white and only if necessary.

Project, NECEC LLC will receive monthly transmission service payments from the applicable TSA's counterparties.

The financing resources outlined above are sufficient to complete construction, operation, maintenance, and associated compliance measures.

We hope this information meets your needs. Please call me at (203) 464-1447 if you have any questions concerning this letter.

Sincerely,



Michael G. Panichi
Vice President & Treasurer
Avangrid

On behalf of Avangrid, Inc. and Avangrid Networks, Inc.

AVANGRID / One City Center, 5th floor, Portland, ME, 04101



Take care of the environment.
Printed in black and white and only if necessary.

**EXHIBIT 10 MDEP LETTER RE: SHORELAND ZONING AND TRANSMISSION
LINES**



JANET T. MILLS
GOVERNER

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



GERALD D. REID
COMMISSIONER

June 8, 2020

Via Email Only

Tom Marcotte
Code Enforcement Officer
Town of Industry
1033 Industry Rd
Industry, ME 04938

RE: Shoreland Zoning and Transmission Lines

Dear Tom:

I write to follow up on your questions regarding shoreland zoning and electric power transmission lines. As you are aware, the Department has adopted, as Chapter 1000 of its rules, *Guidelines for Municipal Shoreland Zoning Ordinances*. State law establishes that each municipality must adopt, administer, and enforce an ordinance that is both consistent with and no less stringent than the Department's Chapter 1000 rules. The Town of Industry adopted a Shoreland Zoning Ordinance, which the Town last updated in 2018. This most recent update was approved by the Department. In responding to your questions and explaining how the Department views the regulation of transmission lines within the shoreland zone, this letter focuses on the Department's interpretation of Chapter 1000. Our understanding, however, is that Industry's Shoreland Zoning Ordinance contains comparable provisions, so this discussion of Chapter 1000 should be helpful to the Town as it applies its ordinance.

I. Transmission Lines Are an Allowed Use in All Shoreland Zoning Districts

Within Chapter 1000, transmission lines, including the associated wires, polls, and towers, are defined as "essential services." Ch. 1000, § 17. Essential services are an allowed use in all shoreland zoning districts. Ch. 1000, Table 1, *Land Uses in the Shoreland Zone*, Row 21. While certain distribution lines are allowed without a permit or with a permit from the code enforcement officer (CEO), Table 1, Row 21(A) and (B), transmission lines are a type of essential service that is allowed with a permit from the planning board. Table 1, Row 21(D).

Chapter 1000 recognizes both the importance of essential services and the fact that often they are linear facilities that run for many miles (e.g., distribution lines, transmission lines, telephone lines, gas pipelines, water lines, and municipal sewer lines). Because of the abundance of wetlands, rivers, streams, and other resources subject to shoreland zoning within the state, these types of linear facilities necessarily must cross the shoreland zone if they are to exist in Maine. This recognition is reflected in essential services being an allowed use in all shoreland zoning districts.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
207-941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

II. Chapter 1000 Contains Land Use Standards Specific to Essential Services

While Chapter 1000 provides that essential services are allowed in all shoreland zoning districts, this rule also establishes specific standards governing the location of new essential services. One standard requires:

Where feasible, the installation of essential services shall be limited to existing public ways and existing service corridors.

Ch. 1000, § 15(L)(1). Although distribution lines commonly are located along roads, typically transmission lines are not. The practical result of this requirement, which establishes a preference for co-location of new essential services alongside existing essential services, is that new transmission lines typically are located next to existing transmission lines. To establish a new, standalone transmission corridor within a shoreland zoning district, an applicant must show why co-location is not feasible.

A second standard establishes:

The installation of essential services, other than road-side distribution lines, is not allowed in a Resource Protection or Stream Protection District, except to provide services to a permitted use within said district, or except where the applicant demonstrates that no reasonable alternative exists. Where allowed, such structures and facilities shall be located so as to minimize any adverse impacts on surrounding uses and resources, including visual impacts.

Ch. 1000, § 15(L)(2). With regard to transmission lines, which typically do not deliver power directly to end users, the effect of this requirement is that applicants must evaluate alternatives and show to the planning board that a reasonable alternative outside the Resource Protection or Stream Protection District does not exist. Chapter 1000 does not define what constitutes a reasonable alternative. Factors such as the environmental impact, availability of land, and cost, are among the types of factors a municipal planning board might consider when evaluating the reasonableness of alternatives. The Department's experience is that when reviewing applications for co-location of a new transmission line alongside an existing line, municipalities traditionally have found co-location to be the preferred alternative.

If an applicant demonstrates that there is no reasonable alternative to locating a new transmission line in a Resource Protection District or Stream Protection District, within those districts the applicant must design the project to minimize the transmission's impact. For example, if a transmission line crosses a wetland that is within a Resource Protection District or stream in a Stream Protection District, a planning board might evaluate, among other things, whether poles are proposed to be located and construction access planned in a way that minimizes the impact to the wetland or stream.

III. Applicability of Other Land Use Standards to Transmission Lines

In addition to the land use standards specific to essential services discussed above, Chapter 1000 contains a number of other standards and you have asked about the potential applicability of several of these to transmission lines. I have elaborated on our prior discussion below.

A. Setbacks

Chapter 1000, § 15(B) contains setback requirements from wetlands and water bodies. These requirements apply to new principal and accessory structures. This section does not apply to transmission lines or the associated poles. Neither fits within the definition of the term “structure.” Chapter 1000, § 17 defines “structure” as:

anything temporarily or permanently located, built, constructed or erected for the support, shelter or enclosure of persons, animals, goods or property of any kind or anything constructed or erected on or in the ground. The term includes structures temporarily or permanently located, such as decks, patios, and satellite dishes. Structure does not include fences; poles and wiring and other aerial equipment normally associated with service drops, including guy wires and guy anchors; subsurface waste water disposal systems as defined in Title 30-A, section 4201, subsection 5; geothermal heat exchange wells as defined in Title 32, section 4700-E, subsection 3-C; or wells or water wells as defined in Title 32, section 4700-E, subsection 8.

This provision excludes several types of development from the definition of structure, including a number of types of development that qualify as essential services. One type of development excluded from the definition of structure is “poles and wiring.” This captures electric power lines, whether the wires are for distribution or transmission of electricity, and the poles that support these wires, along with telephone poles and lines and similar cable and internet infrastructure. Another type of development exempt from the definition of structure is “other aerial equipment normally associated with service drops.” Together, these exemptions facilitate the delivery of essential services to end users, in the case of electric power, by capturing transmission and distribution lines, as well as service drops.

While the setback requirements in Section 15(B) do not apply to transmission lines and their associated poles, please note, however, that Chapter 1000 does not authorize an applicant to locate poles without regard for the potential impact to shoreland zoning resources. As noted above, within the Resource Protection District and Stream Protection District an applicant must locate transmission facilities to minimize adverse impacts on surrounding resources.

B. Vegetation Clearing and Removal

Chapter 1000, § 15(P) contains requirements governing the clearing and removal of vegetation within the shoreland zone. As noted above, essential services such as transmission lines necessarily will cross shoreland zoning resources. For example, rivers, streams, and wetlands are abundant in Maine and a transmission grid cannot be designed without crossing these resources. A transmission grid also cannot be developed and maintained without vegetation removal. This is recognized in Chapter 1000.

Chapter 1000, § 15(R) exempts certain activities from the clearing and vegetation removal standards in Section 15(P), provided all other applicable requirements are complied with and the removal of vegetation is limited to that which is necessary. One category of exempt activity is:

The removal of vegetation from the location of allowed structures or allowed uses, when the shoreline setback requirements of Section 15(B) are not applicable.

Ch. 1000, § 15(R)(2).

As discussed above, transmission lines are an allowed use and are not subject to the setback requirements of Section 15(B). They are exempt from the vegetation clearing and removal standards of Section 15(P).

* * *

I hope this discussion is helpful to the Town of Industry and its application of its shoreland zoning ordinance. Please let me know if you any other questions.

Regards,



Colin A. Clark
Shoreland Zoning Coordinator

**EXHIBIT 11 DEED RESTRICTIONS, EASEMENTS, RIGHTS-OF-WAY, AND OTHER
ENCUMBRANCES**

Location	Grantor	Grantee	Book/Page	Date	Interest (Conveyed)	Description
Durham	CMP	Allen, Irene S.	395/570	09/27/29	Indenture	Indenture granting 50' driveway crossing to Heald. B 04461 P 142 Distribution line crossing granted to Heald. B4565 P 26
Durham	CMP	Carleton, Leon R.	397/602	10/01/29	Use Agreement	2000 Use agreement for agriculture & pasturing rights which may be cancelled at any time by CMP.
Durham	CMP	Hall, Clyde L.	386/499	06/14/30	Letter of Permission	1996 Letter of Permission to Blaine Richardson for a drainage pipe on CMP to be marked with 4' tall post markers. Not assignable. 1929 Agreement with Grantor provides for 150 days notice of termination of agriculture rights.
Durham	CMP	Perkins, Lizzie D. et al	397/598	09/27/29	Agreement	Agreement for well located 100' +/-east of the westerly line of 400' strip.
Durham	CMP	Stowell, Newton S.	395/574	09/10/29	Indenture	Indenture granting 20' crossing to Baldwin. B9764 P87

INDENTURE

N O T N O T

THIS INDENTURE made and entered into this first day of June, 2000, by and between **CENTRAL MAINE POWER COMPANY**, a Maine corporation having its office at 134 Edison Drive, Augusta, Kennebec County, Maine, 04336 hereinafter the "Grantor" and **KIRK HEALD** and **MELISSA HEALD**, having a mailing address of 23 Winston Way, New Gloucester, Cumberland County, Maine 04260, hereinafter the "Grantees."

N O T N O T

A N A N
O F F I C I A L W I T N E S S E T H O F F I C I A L
C O P Y C O P Y

WHEREAS,

- 1) Central Securities Corporation acquired interest in a portion of a 400-foot wide strip of land situated in Durham, Androscoggin County, Maine by deed from George E. Nelson dated September 27, 1929, recorded in the Androscoggin County Registry of Deeds in Book 395, Page 568 and by deed from S. Irene Allen dated September 27, 1929, recorded in said Registry in Book 395, Page 570, hereinafter the "Corridor;"
- 2) Central Securities conveyed interest in the Corridor to Central Maine Power Company by deed dated April 30, 1930 and recorded in said Registry in Book 400, Page 381;
- 3) Grantees desire to exchange the rights reserved in the above said deeds for a fifty-foot wide easement across the Corridor as described below, hereinafter the "Access Road."

NOW THEREFORE,

Grant from the Grantor to the Grantees:

The non-exclusive right to construct, maintain and use a private Access Road and to pass and repass on foot and with vehicles, by means of said Access Road, over, along and across a 50-foot wide easement, the centerline of which is more particularly described as follows:

Beginning at a point in the easterly sideline of the Auburn-Pownal Road, so-called, said point being 181.33 feet distant northerly measured along said sideline of said road from the southeasterly sideline of said Corridor;

Thence N 55° 48' 29" E a distance of 62.83 feet to a point;

Thence N 52° 11' 16" E a distance of 135.7 feet to a point;

Thence N 67° 20' 0" E a distance of 59.3 feet to a point in said southeasterly sideline of said Corridor of the Grantor.

For further reference see a plan entitled "Plan of Land off Auburn-Pownal Road in Durham, Maine for Kirk Heald," dated March, 2000, prepared by Daniel T. C. LaPoint, to be recorded in said Registry of Deeds.

Provided, however, that the rights granted herein shall not include the right to use any of the Grantor's land existing outside the Corridor. The Access Road shall be appurtenant to and run with a parcel of land to be conveyed to the Grantees from Calvin Bowie and Carleen Bowie by a deed to be recorded in said Registry of Deeds, of even date herewith.

Grant from the Grantees to the Grantor:

- 1. In partial consideration for the above grant from Grantor, Grantees do hereby release to the Grantor all rights in the Corridor conveyed to Grantor in the above said deeds, except for the rights granted by Grantor above.

2. The right, without cost, to travel over, along and across any road to be constructed by the Grantee between the lands of the Grantor and public roadways.

The above-described rights and easement granted to the Grantee are granted subject to the following terms and conditions: A N O F F I C I A L A N O F F I C I A L C O P Y C O P Y

1. Any Access Road located within said Corridor will be constructed and maintained at the sole risk and expense of the Grantees and shall be in compliance with all laws, ordinances and regulations pertaining thereto. A N O F F I C I A L A N O F F I C I A L
2. No portion of the Access Road will be located within twenty-five (25) feet of the Grantor's poles, guys or anchors.
3. The Grantees will pay all costs of repairs to any equipment and facilities of the Grantor and the cost of correcting any erosion caused by the construction and maintenance of said Access Road within the Corridor.
4. The rights herein granted shall not limit or restrict nor shall liability arise from the Grantor's use of its Corridor in its operation as a public utility.
5. The Grantees hereby waive any claim that they now have or may have in the future against the Grantor, its parents and affiliates and its and their directors, officers, employees, contractors, agents, successors and assigns, which may arise out of the use of the Corridor by the Grantees or their heirs, assigns, agents, contractors, invitees or others pursuant to this Indenture or otherwise.
6. The Grantees agree to indemnify the Grantor its parents and affiliates and its and their directors, officers, employees, contractors, agents, successors and assigns and hold it and them harmless from and against all claims, demands and actions arising out of the use by the Grantees, or their heirs, assigns, agent, contractors, invitees or others.

The terms Grantor and Grantees shall include their respective heirs, successors, executors or assigns.

IN WITNESS WHEREOF the parties, or their representatives, have signed and sealed this Indenture, all as of the day and year first above written.

Signed, Sealed and Delivered in presence of

Donna M. O'Leary
Witness

Witness

Witness

CENTRAL MAINE POWER COMPANY

By: Kenneth H. Freye
Kenneth H. Freye, Manager
Property Management

Kirk D. Heald
Kirk Heald

Melissa Heald
Melissa Heald

STATE OF MAINE
Kennebec, ss.
NOT
AN
OFFICIAL
COPY

NOT
AN
OFFICIAL
COPY, 2000.

The above named Kenneth H. Foye, personally appeared before me, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said Central Maine Power Company.

OFFICIAL
COPY

OFFICIAL
COPY
Leon O. Emery
Notary Public

Leon O. Emery
Printed Name

My Commission Expires:



LEON O. EMERY
Notary Public, Maine
My Commission Expires May 27, 2007

STATE OF MAINE
Cumberland, ss.

June 21, 2000.

The above named Kirk Heald and Melissa Heald, personally appeared before me and acknowledged the foregoing instrument to their free act and deed.

Julie A. Mason
Notary Public/Attorney At Law
JULIE A. MASON
Notary Public, Maine
My Commission Expires October 4, 2008
Printed Name



My Commission Expires:

ANDROSCOGGIN COUNTY

Jeanine D. Bergeron

REGISTER OF DEEDS

Bk4565 Pg257 #24795

12-29-2000 @ 09:39a

CORRECTIVE INDENTURE

N O T N O T

The parties to an indenture entered into on June 1, 2000 agree to correct that indenture to clarify that Grantees' rights are subject to Grantor's license agreement as the parties originally intended. This Corrective Indenture supercedes and replaces the original indenture to be effective as of the execution of the original Indenture.

N O T N O T

THIS INDENTURE made and entered into this first day of June, 2000, by and between CENTRAL MAINE POWER COMPANY, a Maine corporation having an office at 83 Edison Drive, Augusta, Kennebec County, Maine, 04336, hereinafter the "Grantor" and KIRK HEALD and MELISSA HEALD, having a mailing address of P.O. Box 342, New Gloucester, Cumberland County, Maine 04260, hereinafter the "Grantees."

WITNESSETH**WHEREAS,**

- 1) Central Securities Corporation acquired interest in a portion of a 400-foot wide strip of land situated in Durham, Androscoggin County, Maine by deed from George E. Nelson dated September 27, 1929, recorded in the Androscoggin County Registry of Deeds in Book 395, Page 568 and by deed from S. Irene Allen dated September 27, 1929, recorded in said Registry in Book 395, Page 570, hereinafter the "Corridor;"
- 2) Central Securities conveyed interest in the Corridor to Central Maine Power Company by deed dated April 30, 1930 and recorded in said Registry in Book 400, Page 381;
- 3) Grantees desire to exchange the rights reserved in the above said deeds for a fifty- foot wide easement across the Corridor as described below, hereinafter the "Access Road."

NOW THEREFORE,**Grant from the Grantor to the Grantees:**

The non-exclusive right to construct, maintain and use a private Access Road and to pass and repass on foot and with vehicles, by means of said Access Road, over, along and across a 50-foot wide easement, the centerline of which is more particularly described as follows:

Beginning at a point in the easterly sideline of the Auburn-Pownal Road, so-called, said point being 181.33 feet distant northerly measured along said sideline of said road from the southeasterly sideline of said Corridor;

Thence N 55° 48' 29" E a distance of 62.83 feet to a point;

Thence N 52° 11' 16" E a distance of 135.7 feet to a point;

Thence N 67° 20' 0" E a distance of 59.3 feet to a point in said southeasterly sideline of said Corridor of the Grantor.

For further reference see a plan entitled "Plan of Land off Auburn-Pownal Road in Durham, Maine for Kirk Heald," dated March, 2000, prepared by Daniel T. C. LaPoint, to be recorded in said Registry of Deeds.

Provided, however, that the rights granted herein shall not include the right to use any of the Grantor's land existing outside the Corridor. The Access Road shall be appurtenant to and run with a parcel of land to be conveyed to the Grantees from Calvin Bowie and Carleen Bowie by a deed to be recorded in said Registry of Deeds, of even date herewith.

COPY COPY
This grant to Grantees is subject to Grantor's obligations as Licensor under a License Agreement between Grantor and AT&T Communications of New England, Inc., dated February 1, 1994, a memorandum of which is recorded in said Androscoffin Registry in Book 3861, Page 055, and in particular, to Section 2.3 as it relates to the obligations of third parties. Said Section 2.3 states:

OFFICIAL OFFICIAL
2.3. Licensor shall cause any agreement with another party for occupancy of the Right-of-Way to provide that 1) such occupancy is subject to AT&T's rights under this Agreement, 2) the other party will not interfere with nor disturb AT&T's System or Facilities and 3) before the third party excavates within five (5) feet of AT&T's Facilities, or blasts on the Right-of-Way, the Licensor shall require the third party to submit its plans to AT&T to demonstrate that such action will not interfere with AT&T's Facilities. AT&T shall have thirty (30) days from confirmed receipt of said plans to approve or object to such plans in writing. Failure by AT&T to raise a bona fide objection within said thirty (30) days shall constitute approval. If AT&T raises a bona fide objection in writing to Licensor and the third party within thirty (30) days, Licensor shall either require the third party (a) make necessary changes to its said plans to address the objection and resubmit the plans, in which event AT&T shall have ten (10) days from the date of resubmission to approve or object further in writing to the revised plans (failure by AT&T to raise a bona fide objection constituting approval of such revised plans); or (b) Licensor shall proceed in accordance with the dispute resolution provisions set forth in Section 21 of this License Agreement.

Grant from the Grantees to the Grantor:

- 1. In partial consideration for the above grant from Grantor, Grantees do hereby release to the Grantor all rights in the Corridor conveyed to Grantor in the above said deeds, except for the rights granted by Grantor above.
- 2. The right, without cost, to travel over, along and across any road to be constructed by the Grantee between the lands of the Grantor and public roadways.

The above-described rights and easement granted to the Grantee are granted subject to the following terms and conditions:

- 1. Any Access Road located within said Corridor will be constructed and maintained at the sole risk and expense of the Grantees and shall be in compliance with all laws, ordinances and regulations pertaining thereto.
- 2. No portion of the Access Road will be located within twenty-five (25) feet of the Grantor's poles, guys or anchors.
- 3. The Grantees will pay all costs of repairs to any equipment and facilities of the Grantor and the cost of correcting any erosion caused by the construction and maintenance of said Access Road within the Corridor.
- 4. The rights herein granted shall not limit or restrict nor shall liability arise from the Grantor's use of its Corridor in its operation as a public utility.

5. The Grantees hereby waive any claim that they now have or may have in the future against the Grantor, its parents and affiliates and its and their directors, officers, employees, contractors, agents, successors and assigns, which may arise out of the use of the Corridor by the Grantees or their heirs, assigns, agents, contractors, invitees or others pursuant to this Indenture or otherwise.

6. The Grantees agree to indemnify the Grantor its parents and affiliates and its and their directors, officers, employees, contractors, agents, successors and assigns and hold it and them harmless from and against all claims, demands and actions arising out of the use by the Grantees, or their heirs, assigns, agent, contractors, invitees or others.

The terms Grantor and Grantees shall include their respective heirs, successors, executors or assigns.

IN WITNESS WHEREOF the parties, or their representatives, have signed and sealed this Indenture, to be effective as of June 1, 2000.

Signed, Sealed and Delivered
in presence of

CENTRAL MAINE POWER COMPANY

Donna M. Bean
Witness

By: Kenneth Freye
Kenneth H. Freye, Manager
Property Management

Donna M. Bean
Witness

Kirk Heald
Kirk Heald

Randy T. Mahoney
Witness

Melissa Heald
Melissa Heald

STATE OF MAINE
Kennebec, ss.

December 20, 2000.

The above named Kenneth H. Freye, personally appeared before me, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Central Maine Power Company.

RSAM
Attorney at Law

R Scott Mahoney
Printed Name

My Commission Expires:

NOT
AN
OFFICIAL
COPY

NOT
AN
OFFICIAL
COPY

STATE OF MAINE
Kennebec, ss.

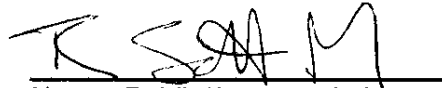
NOT
AN

NOT
December 20, 2000.

OFFICIAL
COPY

OFFICIAL
COPY

The above-named Kirk Heald, personally appeared before me and acknowledged the foregoing instrument to be his free act and deed.



Notary Public/Attorney At Law
R Scott Mahoney

Printed Name

~~My Commission Expires:~~

ANDROSCOGGIN COUNTY

Jeanine D. Bergeron

REGISTER OF DEEDS

N O T N O T
All bearings are based on magnetic north, 1995 A N

O F F I C I A L O F F I C I A L

The Easement shall be subject to the CMP Grant Of Easement and Consent to Maritimes & Northeast Pipeline, L.L.C., recorded at the Cumberland County Registry of Deeds, Book 6379, Page 6. T

A N A N
The Easement shall also be subject to the conditions, limitations and covenants set forth below and shall, subject thereto, be for the benefit of and appurtenant to land of Grantee described above. C O P Y

Grant from the Grantee to the Grantor:

Grantee does hereby convey to the Grantor the following:

1. Any rights, not described above, that the Grantee may have in the Grantor's land pursuant to reservations in Grantor's deeds described above or otherwise.
2. The right and easement to pass and repass on foot and with vehicles over, along and across any roadway as now exists, or to be constructed by the Grantee in the future, between any public road and the easement area herein conveyed.

Covenants, Terms and Conditions:

The above-described Easement granted by Grantor to Grantee is subject to the terms and conditions described below, and Grantee does hereby covenant and agree as follows:

1. The Easement granted herein is subject to an Any roadway constructed and located within the Easement shall be constructed and maintained at the sole risk and expense of the Grantee and shall be constructed, operated and maintained in compliance with all laws, ordinances and regulations pertaining thereto.
2. Any roadway constructed and located within the Easement shall be constructed in a manner so that the existing grade shall not be increased.
3. Installation of underground utilities shall be coordinated in advance with the Grantor.
4. The Grantee shall be responsible for the cost of relocating or raising pole structures and or wires, located within Grantor's land, if Grantor determines in its sole discretion that the (i) grade of any roadway or (ii) the use of the Easement as set forth herein interferes with said pole structures or wires, or the Grantor's maintenance thereof.
5. Construction of the roadway within the Easement is limited to twenty feet.

N O T

N O T

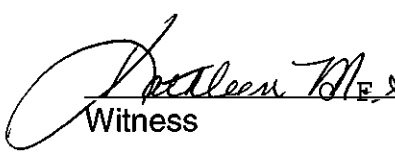
6. The Grantee will take any steps necessary to insure that erosion does not occur and will, at their sole expense, repair any erosion which may occur as a result of the exercise of the rights herein granted to the Grantee.
7. The Grantee will at their sole expense, obtain prior to any construction, and will at all times comply with and maintain the roadway in compliance with all local, state and federal permits, and will comply with all laws, ordinances, rules, regulations and requirements of all federal, state and local governments and appropriate departments, commissions, boards and officers thereof, which may be applicable to the exercise of the rights granted herein and use of the Easement contemplated hereby.
8. The Grantee agrees to pay any and all cost for repair of damage by them or their employees, agents or contractors, caused to Grantor's land or to Grantor's transmission lines and facilities, now or hereinafter located on the Grantor's land, or equipment connected thereto, resulting from the exercise of the Easement herein granted.
9. The Easement herein granted to Grantee shall at all times be subject to and shall not in any way limit Grantor's rights in or use of Grantor's land, and nothing in this Indenture shall be construed to limit or restrict Grantor's use of its land in its operation as a public utility or otherwise, including but not limited to the installation, removal and maintenance of utility lines and wires, structures and equipment. Further, nothing in this Indenture shall be construed as conveying any right to Grantee not expressly granted herein nor shall any liability arise from Grantor's use of its land.
10. The Grantee, for itself and its heirs and assigns, hereby waive any claim they now have or may have in the future against the Grantor and or its parent corporation and affiliates and their directors, officers, employees, contractors, agents, its and their successors and assigns, which may arise out of the Grantee, its heirs and assigns, use of the Easement, pursuant to this Indenture or otherwise.
11. The Grantee, for itself and its heirs and assigns, agree to indemnify the Grantor and it's parent corporation and affiliates and it's and their directors, officers, employees, agents, contractors, successors and assigns and hold it and them harmless from and against all claims, penalties, fines, demands and actions arising out of the use of the Grantor's land by the Grantee, or its heirs, assigns, agents, contractors, invitees or others.

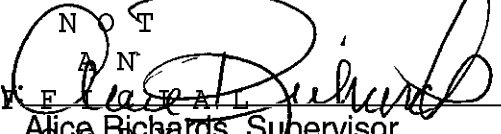
The terms Grantor and Grantee shall include their respective successors, affiliates, heirs or assigns.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on this Indenture, all as of the day and year first above written.


OFFICIAL COPY
Signed, Sealed and Delivered
in presence of:

OFFICIAL COPY
CENTRAL MAINE POWER COMPANY

NOT A N
OFFICIAL COPY

Witness

NOT A N
OFFICIAL COPY
BY: 
Alice Richards, Supervisor
Real Estate Services


Witness

By: 
Marcus Baldwin

STATE OF MAINE
KENNEBEC, ss. OFFICIAL COPY

NOTARY PUBLIC
OFFICIAL COPY, 2017.

The above named Alice Richards, Supervisor, Real Estate Services, personally appeared before me and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said Central Maine Power Company.

OFFICIAL COPY
Patricia Ann Larrivee
Notary Public

PATRICIA ANN LARRVEE
Notary Public, Maine
My Commission Expires April 7, 2019

SEAL

STATE OF MAINE
County of York, ss.

October 23, 2017.

The above named Marcus Baldwin personally appeared before me and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Wendy E. Lank
Notary Public/Attorney At Law

Wendy E. Lank
Printed Name

My Commission Expires: Jan. 14, 2018

SEAL

ANDROSCOGGIN COUNTY
TINA M CHOUINARD
REGISTER OF DEEDS

N O T A N E A S E M E N T D E E D N O T A N

CENTRAL MAINE POWER COMPANY ("CMP"), a Maine corporation having an office and place of business at 83 Edison Drive, Augusta, Kennebec County, State of Maine, 04336, hereby grants to KIRK HEALD and MELISSA HEALD, as joint tenants, having a mailing address of P.O. Box 342, New Gloucester, Cumberland County, Maine 04260, ("Grantees") the perpetual right and easement to erect, construct, maintain, repair, rebuild, replace and remove overhead electric distribution and communication lines, consisting of necessary poles, wires, cables, guys and anchors to be located on a single set of poles (collectively "Pole Line") over and across (but not under) land of CMP, as now staked out, located in the Town of Durham, Androscoggin County and State of Maine, marked "PROPOSED DIST" on the sketch attached hereto and marked "EXHIBIT A." The centerline of the Pole Line is more particularly described as follows:

Beginning at Pole #214 on the Pownal Road, so-called, as shown on said Exhibit A; thence northeasterly to Pole P1 as shown on Exhibit A, and continuing toward Pole P2, to the extent of CMP's ownership ("CMP's Land") as described in a deed from George E. Nelson to Central Securities Corporation, dated September 27, 1929, recorded in the Androscoggin County Registry of Deeds in Book 395, Page 568 and in a deed from S. Irene Allen to Central Securities Corporation, dated September 27, 1929, recorded in said Registry in Book 395, Page 570. CMP is successor in title to Central Securities Corporation by a deed dated April 30, 1930, recorded in said Registry in Book 400, Page 381.

Also granting the right to clear and keep clear an area eight feet on either side of the centerline of said Pole Line.

The grant of easement herein is subject to CMP's obligations as Licensor under a License Agreement between CMP and AT&T Communications of New England, Inc., dated February 1, 1994, a memorandum of which is recorded in said Androscoggin Registry in Book 3861, Page 055, and in particular, to Section 2.3 as it relates to the obligations of third parties. Said Section 2.3 states:

2.3. Licensor shall cause any agreement with another party for occupancy of the Right-of-Way to provide that 1) such occupancy is subject to AT&T's rights under this Agreement, 2) the other party will not interfere with nor disturb AT&T's System or Facilities and 3) before the third party excavates within five (5) feet of AT&T's Facilities, or blasts on the Right-of-Way, the Licensor shall require the third party to submit its plans to AT&T to demonstrate that such action will not interfere with AT&T's Facilities. AT&T shall have thirty (30) days from confirmed receipt of said plans to approve or object to such plans in writing. Failure by AT&T to raise a bona fide objection within said thirty (30) days shall constitute approval. If AT&T raises a bona fide objection in writing to Licensor and the third party within thirty (30) days, Licensor shall either require the third party (a) make necessary changes to its said plans to address the objection and resubmit the plans, in which event AT&T shall have ten (10) days from the date of resubmission to approve or object further in writing to the revised plans (failure by AT&T to raise a bona fide objection constituting approval of such revised plans); or (b) Licensor shall proceed in accordance with the dispute resolution provisions set forth in Section 21 of this License Agreement.

As partial consideration for the grant of easement herein Grantees covenant and agree as follows:

O F F I C I A L O F F I C I A L

1. Grantees shall not install any poles with a height above ground of more than thirty feet (30') without CMP's prior written consent.
2. Grantees shall give CMP at least five (5) business days notice prior to any entry by or for Grantees pursuant to this easement, except in emergencies in which case Grantees shall give CMP notice as soon as possible prior to such entry. Grantees may not enter without CMP's approval, which shall not be unreasonably withheld. When CMP determines, in its sole discretion, that any such entry may affect CMP's property, CMP may have a representative on site during Grantees' entry with the authority, but not the duty, to halt Grantees' work on CMP's Land and Grantees will promptly reimburse CMP for all costs of having the representative on site.
3. Grantees agree that they will not place any material on or remove any material from CMP's Land if, in the reasonable opinion of CMP, such action would endanger or interfere with current or future use of CMP's Land in CMP's operation as a public utility.
4. Grantees shall construct and maintain the Pole Line, and appurtenances thereto, located on CMP's Land at the sole risk and expense of the Grantees and in compliance with all laws, ordinances and regulations pertaining thereto.
5. The Grantees will pay all costs of repairs to any equipment and facilities of CMP and the cost of correcting any erosion caused by the construction or maintenance of said Pole Line.
6. The rights herein granted shall not limit or restrict, nor shall liability arise from, CMP's use of CMP's Land in its operation as a public utility.
7. The Grantees hereby waive any claim that they now have or may have in the future against CMP, its parent company and affiliates and its and their directors, officers, employees, contractors, agents, successors and assigns, which may arise out of the use of CMP's Land by the Grantees or their heirs, assigns, agents, contractors, invitees or others pursuant to this deed or otherwise.
8. The Grantees agree to indemnify CMP, its parent company and affiliates and its and their directors, officers, employees, contractors, agents, successors and assigns and hold it and them harmless from and against all claims, demands and actions arising out of the use by the Grantees or their heirs, assigns, agents, contractors, invitees or others.

The terms "CMP" and "Grantees" shall include their respective heirs, successors, executors or assigns.

IN WITNESS WHEREOF, the said Central Maine Power Company has caused this instrument to be signed and sealed on its behalf by Kenneth H. Freye, its duly authorized representative on this twentieth day of December, 2000.

NOT AN OFFICIAL COPY

Signed, Sealed and Delivered

In presence of

NOT AN OFFICIAL COPY

Donna M. O'Neil

CENTRAL MAINE POWER COMPANY

NOT AN OFFICIAL COPY

By: Kenneth H. Freye
Kenneth H. Freye, Manager
Property Management

STATE OF MAINE
Kennebec, ss.

December 20, 2000

The above-named Kenneth H. Freye personally appeared before me and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Central Maine Power Company.

R. Scott Mahoney

Attorney at Law

Printed Name: R. Scott Mahoney

My Commission Expires:

EXHIBIT 12 HISTORIC PROPERTIES MEMORANDUM OF AGREEMENT

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

MEMORANDUM OF AGREEMENT

AMONG THE U.S. ARMY CORPS OF ENGINEERS,

**U.S. DEPARTMENT OF ENERGY, U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, CENTRAL MAINE POWER COMPANY, AND**

THE MAINE STATE HISTORIC PRESERVATION OFFICER

REGARDING THE CENTRAL MAINE POWER COMPANY'S

NEW ENGLAND CLEAN ENERGY CONNECT PROJECT

BEATTIE TOWNSHIP TO LEWISTON, MAINE

INCLUSIVE OF SIX MAINE COUNTIES AND 38 MUNICIPALITIES OR TOWNSHIPS

WHEREAS, the U.S. Army Corps of Engineers ("COE") plans to issue a permit for the construction of Central Maine Power Company's ("Proponent") New England Clean Energy Connect ("NECEC") project (COE Permit Application No. NAE-2017-01342) (the "Undertaking"), pursuant to Section 404 of the Clean Water Act (33 U.S.C. § 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403); and

WHEREAS, Proponent has applied to the U.S. Department of Energy's (DOE's) Office of Electricity for a Presidential permit for the international border crossing associated with the NECEC project in accordance with the DOE's applicable administrative procedures at 10 CFR § 205.320 et. seq.; and

WHEREAS, pursuant to the authority delegated by the President of the United States under Executive Order 10485, as amended by Executive Order 12038, the U.S. Department of Energy ("DOE") receives and considers applications for permits for the construction, operation, maintenance, and connection of facilities for the transmission of electric energy at the borders of the United States ("Presidential permit"); and

WHEREAS, Executive Order 10485, amended by Executive Order 12038, authorizes DOE to issue a Presidential permit if, inter alia, the issuance of the permit is found to be consistent with the public interest; and

WHEREAS, in deciding whether issuance of a Presidential permit is in the public interest, DOE determines the proposed project's impact on electric reliability as well as its potential environmental impacts, including potential impacts to historic properties or cultural resources; and

WHEREAS, the issuance of a Presidential permit by DOE for the international border crossing associated with the NECEC project indicates that there is no federal objection to the proposed border crossing and NECEC project, but does not mandate that the NECEC project be undertaken; and

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

WHEREAS, COE has been designated the lead federal agency in compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations in 36 CFR § 800.2(a)(2); and

WHEREAS, the Undertaking consists of a new High Voltage Direct Current (“HVDC”) transmission line that will tie into the existing system and upgrades to existing alternating current (“AC”) transmission lines totaling 200.4 miles (322.4 kilometers), construction of a new converter station, a new substation, and multiple system upgrades; and

WHEREAS, COE has defined the Undertaking’s indirect area of potential effects (“APE”) as a 0.5-mile (0.8-kilometer) buffer on each side of the project centerline; and the direct APE as consisting of the entire right-of-way width or facility footprint where ground-disturbing activities could take place; and

WHEREAS, COE has determined that the Undertaking will have an adverse effect on four historic properties (Appalachian National Scenic Trail (“ANST”) [Survey Map ID-66], Rural Agricultural Historic District: E. Gray Farm and B.F. Hilton Farm [Survey Map ID-1028 and Survey Map ID-1020], Turmel Road Barn [Survey Map ID-795], and Bowman Airfield [Survey Map ID-719]) that are eligible for listing in the National Register of Historic Places (“NRHP”), and has consulted with the Maine State Historic Preservation Officer (“Maine SHPO”) pursuant to 36 CFR Part 800 and 33 CFR Part 325, Appendix C (the regulations implementing Section 106 of the NHPA), and SHPO concurred with COE’s determination on 18 March 2020; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), COE has notified the Advisory Council on Historic Preservation (“ACHP”) of its determination of adverse effects on historic properties with specified documentation and ACHP has chosen not to participate in the consultation pursuant to 36 CFR Section 800.6(a)(1)(iii); and

WHEREAS, construction of portions of the Undertaking will also require authorization by the DOE in accordance with 10 CFR § 205.320 et. seq., DOE is a consulting party (in accordance with 36 CFR §800.2) and signatory (in accordance with 36 CFR §800.6(c)) in this consultation; and

WHEREAS, COE has invited the Aroostook Band of the Micmacs, Houlton Band of the Maliseet Indians, Passamaquoddy Tribe, and Penobscot Nation to participate in the Section 106 process as consulting parties in accordance with 36 CFR Section 800.3(f)(2) and those tribes have chosen not to participate in consultation; and

WHEREAS, COE has invited Central Maine Power (“CMP” or “Proponent”) to sign this Memorandum of Agreement (“MOA”) as an invited signatory because the Proponent or its successors in NECEC project ownership shall be responsible for constructing and operating the Undertaking, conducting additional cultural resources investigations, implementing treatment plans, and other tasks under this MOA; and

WHEREAS, COE has consulted with the U.S. Department of the Interior National Park Service (“NPS”) and has invited NPS to sign this MOA as an invited signatory because the

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

NECEC project will be crossed by portions of the ANST in Bald Mountain Township, Somerset County, Maine and the ANST is a NRHP-eligible resource, and the NPS is the lead federal agency for the administration of the entire ANST under the National Trails System Act (16 USC § 1241 et seq.); and

WHEREAS, COE has consulted with the Appalachian Trail Conservancy (“ATC”), which aids NPS in the management of the ANST, regarding the potential effects of the Undertaking on the ANST, and has invited ATC to sign this MOA as a concurring party in accordance with 36 CFR § 800.2(c)(3); and

WHEREAS, COE has consulted with the Maine Appalachian Trail Club (“MATC”), which aids NPS in the management of the ANST, regarding the potential effects of the Undertaking on the ANST, and has invited MATC to sign this MOA as a concurring party in accordance with 36 CFR § 800.2(c)(3); and

NOW, THEREFORE, COE, DOE, NPS, CMP and the Maine SHPO agree that the NECEC project shall be implemented in accordance with the following stipulations in order to take into account the Undertaking’s adverse effects on historic properties.

STIPULATIONS

COE shall ensure that the following measures are carried out according to the provisions set forth herein including the plans included in Appendix A attached hereto:

I. IDENTIFICATION OF HISTORIC PROPERTIES

- A. COE is responsible for ensuring that Proponent conducts inventories of all portions of the APE that have not been previously surveyed for cultural resources (including any post-permit newly requested project realignments, if any). Limited archaeological testing, conducted by Proponent’s consultants, may be necessary at some sites to evaluate their eligibility for inclusion in the NRHP. Archaeological testing shall be conducted according to testing plans that have been submitted for review and approval to COE staff and the Maine SHPO.
- B. Proponent shall obtain permits necessary to conduct cultural resources investigations, if necessary, and copies of the permits shall be filed by Proponent with COE.
- C. In reports documenting the results of additional inventory and evaluation studies, Proponent’s cultural resources consultants will make recommendations regarding the NRHP eligibility (in terms of 36 CFR § 60.4) and project effects (per 36 CFR § 800.5) on cultural resources identified in the APE. Based on Proponent’s recommendations, COE staff will make final determinations of eligibility and effect, after consultations with Maine SHPO.

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

- D. Those cultural resources which COE staff determines do not meet the NRHP criteria, after consultations with Maine SHPO (and other consulting parties, as appropriate), will require no further consideration. Historic properties, which are cultural resources that COE staff, after consultations with the Maine SHPO, determines to be listed or eligible for listing on the NRHP, will be treated in accordance with Stipulation III of this MOA. If unable to agree on a determination, COE will follow the dispute resolution process in accordance with Stipulation VIII.

II. REPORTING REQUIREMENTS AND REVIEWS

- A. Proponent shall provide copies of draft reports documenting additional inventories, testing plans, evaluative testing, and new treatment plans to COE staff and Maine SHPO. The reviewing parties shall provide their comments on draft reports and plans to Proponent within thirty (30) days of receipt. Proponent shall revise reports and plans to address, as appropriate, the consolidated comments on drafts provided by reviewing parties. Proponent shall distribute copies of final reports and plans to COE staff and Maine SHPO within thirty (30) days after receiving comments from COE on the drafts.
- B. Each year following the execution of this MOA until it expires or is terminated, Proponent shall provide all parties to this MOA a summary report detailing work undertaken pursuant to its terms. Such report shall include scheduling changes proposed, problems encountered, and disputes and objections received during execution of the terms of this MOA.

III. TREATMENT OF HISTORIC PROPERTIES

- A. Proponent will avoid, minimize, and mitigate adverse effects to the ANST (Survey Map ID-66) in Bald Mountain Township; the proposed Rural Agricultural Historic District: E. Gray Farm (Survey Map ID-1028) and B.F. Hilton Farm (Survey Map ID-1020) in the Town of Starks; the Turmel Road Barn (Survey Map ID-795) in the Town of Livermore Falls; and the Bowman Airfield (Survey Map ID-719) in the Town of Livermore Falls in accordance with the treatment plans and implementation schedule presented in Appendix A.
- B. The Proponent, NPS, and Maine SHPO will enter into a separate agreement by December 31, 2020 that will govern the relocation of the ANST to the preferred route across the 1609 Troutdale Road Parcel in accordance with Appendix A. The term of this agreement will begin with its execution (by December 31, 2020) and will expire when the ANST has been relocated to the preferred route.
- C. Proponent will ensure that the consulting architectural historian meets the Secretary of the Interior's Standards (36 CFR Part 61), is an approved Maine State Historic Preservation Commission ("MHPC") historic preservation consultant, and is a Cultural and Architectural Resource Management Archive ("CARMA") trained consultant. The

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

architectural historian will conduct reconnaissance-level surveys according to MHPC standards set by the *Above Ground Resources Survey Manual*.

- D. Proponent will implement avoidance and treatment measures for the following 16 archaeological sites: ME 24-40, ME 013-002, ME 013-003, ME 131-003, ME 154-009, ME 154-012, ME 217-001, ME 217-003, ME 293-015, ME 293-016, ME 358-008, ME 431-035, ME 484-006, ME 478-006, ME 478-007, ME 491-057, and Quinnam Cemetery, in accordance with the plans and implementation schedule presented in Appendix A.
- E. Proponent will ensure that the consulting archaeologist(s) meet(s) MHPC's *Standards for Archaeological Work in Maine* (Chapter 812 [94–089]) and the professional qualifications for archaeology in 36 CFR Part 61. Archaeological monitors will be present during ground-disturbing construction activities within 50 meters (164 feet) of Sites ME 24-40, ME 013-002, ME 013-003, ME 131-003, ME 154-009, ME 154-012, ME 217-001, ME 217-003, ME 293-015, ME 293-016, ME 358-008, ME 431-035, ME 484-006, ME 478-006, ME 478-007, ME 491-057, and Quinnam Cemetery.

IV. DISPOSITION OF CULTURAL AND HUMAN REMAINS

- A. Proponent will ensure that all materials and records resulting from actions taken pursuant to this MOA are curated within the State of Maine, in accordance with 36 CFR Part 79.
- B. If human remains are discovered while carrying out activities pursuant to this MOA, Proponent will ensure that all work cease in the area of the discovery during notification of local law enforcement and consultation with SHPO.
- C. Proponent will ensure that any human remains and grave-associated artifacts encountered during any work undertaken pursuant to this MOA are treated in accordance with ACHP's *Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects*, adopted by ACHP on February 23, 2007.

V. POST-REVIEW DISCOVERIES

If potential historic properties are discovered or unanticipated effects on historic properties are found during the term of this MOA, the parties will consult in accordance with 36 CFR Section 800.13 and Proponent may be required to conduct additional investigations and implement additional avoidance, protection, or mitigation measures as a result of such consultation.

VI. DURATION

This MOA will expire if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, COE may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VII below.

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

VII. AMENDMENTS

At any time during the period in which this MOA is in effect, COE, DOE, the Maine SHPO, other signatories, or Proponent may request that it be amended, whereupon the parties shall consult to consider the proposed amendment. 36 CFR Section 800.6(c)(7) shall govern the execution of any such amendment. An amendment will be effective on the date a copy signed by all of the parties is filed with ACHP.

VIII. DISPUTE RESOLUTION

Should a signatory, invited signatory, or concurring party to this MOA object to actions proposed or the manner in which the terms of this MOA are implemented, COE shall consult with such party to resolve the objection. If COE determines that such objection cannot be resolved, COE will:

- A. Forward all documentation relevant to the dispute, including COE's proposed resolution, to the ACHP. The ACHP shall provide COE with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, COE shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories, invited signatories, and concurring parties, and shall provide them with a copy of the written response. COE will then proceed according to its final decision.
- B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, COE may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, COE shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories, invited signatories, and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.
- C. COE's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remains unchanged.

IX. TERMINATION

- A. If any signatory or invited signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories and invited signatories to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) days (or another time period agreed to by all signatories and invited signatories) an amendment cannot be reached, any signatory or invited signatory may terminate the MOA upon written notification to the other signatories, invited signatories, and the concurring parties.
- B. Once the MOA is terminated, and prior to work continuing on the undertaking, COE must either (a) execute a new MOA pursuant to 36 CFR § 800.6 or (b) request, take into

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

account, and respond to the comments of the ACHP under 36 CFR § 800.7. COE shall notify the signatories, invited signatories, and concurring parties as to the course of action it will pursue.

- C. Execution of this MOA by COE, DOE, and the Maine SHPO and implementation of its terms evidence that COE has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

SIGNATORIES:

U.S. Army Corps of Engineers

Tammy R. Turley Digitally signed by Tammy R.
Turley
Date: 2020.06.19 09:12:16 -04'00'

Tammy R. Turley – Chief, Regulatory Division

U.S. Department of Energy

Michael P. Coe

Michael P. Coe
Director, Operational Modeling and Technical Assistance, Transmission Permitting and
Technical Assistance Division
Office of Electricity

Maine State Historic Preservation Officer

Kirk F. Mohnney

Kirk F. Mohnney – Director Maine Historic Preservation Commission, Historic Preservation
Officer

New England Clean Energy Connect Project
Historic Properties Memorandum of Agreement

INVITED SIGNATORIES:

U.S. Department of the Interior National Park Service



Wendy K. Janssen – Superintendent, Appalachian National Scenic Trail

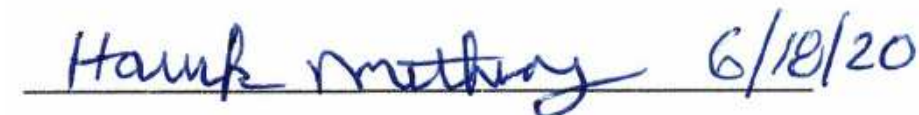
Central Maine Power Company



Thorn Dickinson – Vice President

CONCURRING PARTIES:

Appalachian Trail Conservancy



Hawk Metheny – Senior Regional Director, Northeast

Maine Appalachian Trail Club



Anthony Barrett – Executive Committee Director

EXHIBIT 13 LIST OF ABUTTERS AND ABUTTER NOTIFICATION LETTER

NECEC - Durham 500' Abutters

Town	County	Map-Lot	Owner (1st Owner, Full Name)	Owner 2 (2nd+ Owner(s), Full Name)	Mailing Address	Mailing Town	Mailing State	Mailing ZIP
Durham	Androscoggin	009-001	William & Jennifer Gardiner		66 Tidewater Lane	Yarmouth	ME	04096
Durham	Androscoggin	009-002	William & Barbara Schneider		50 Rough Rider Road	Durham	ME	04222
Durham	Androscoggin	009-002-A	Keith R. Higgins		734 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-003	Debra L. Oliver		758 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-003-A	John A. & Pamela B. Lizotte		744 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-004	Meredith M. & Kevin F. Black		774 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-005	David W. & Jeanne M. Lincoln		808 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-005-A	Tara & Samuel Knight		852 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-005-B	David R. Dimick		836 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-005-C	David W. & Jeanne M. Lincoln		808 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-005-D	Marc V. & Susan M. Menard		796 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-005-E	James A. Brown Living Trust	c/o J.A. & L.E. Brown	319 Hollowtree Drive	Seffner	FL	33584
Durham	Androscoggin	009-006	Jerome Lord		858 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-007	Wisteria Farm L & Trust	c/o Robert Sevigny	38 Rivers Drive	Durham	ME	04222
Durham	Androscoggin	009-010-B	Michelle Harrison		321 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-011	Sheldon & Katie Stanley		339 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-012	William Bichrest		340 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-012-A	William & Julie Ann White		322 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-012-B	Danielle & Shane Lizotte		744 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	009-013	Robert C. Thomas		1450 Royalsborough Road	Durham	ME	04222
Durham	Androscoggin	009-014	Eric & Patricia Emery		349 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-015	Town of Durham		630 Hallowell Road	Durham	ME	04222
Durham	Androscoggin	009-015-A	Owen Haskell		510 Durham Road	New Gloucester	ME	04260
Durham	Androscoggin	009-017	Kirk & Melissa Heald		39 Heald Drive	Durham	ME	04222
Durham	Androscoggin	009-017-A	Randall K. & Angie M. Miller		24 Rivers Drive	Durham	ME	04222
Durham	Androscoggin	009-017-B	Brian Merrill & Amanda Merrill		38 Rivers Drive	Durham	ME	04222
Durham	Androscoggin	009-017-C	Jeremy B. & Lisa M. Arsenaault		32 Heald Drive	Durham	ME	04222
Durham	Androscoggin	009-017-D	Michael K. & Melissa S. Libby		74 Heald Drive	Durham	ME	04222
Durham	Androscoggin	009-017-E	Randy T. Huntley		66 Heald Drive	Durham	ME	04222
Durham	Androscoggin	009-017-F	Randy T. Huntley		66 Heald Drive	Durham	ME	04222
Durham	Androscoggin	009-021	Patrick Quigg		443 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-021-A2	Jacob Atherton &	Page Crowley	9 Maine Forest Drive	Durham	ME	04222
Durham	Androscoggin	009-021-B	Wendy L. Ayotte		455 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-021-C	Matthew W. & Linda R. Tiffany		401 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-025	Robert & Margaret Crowley		491 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-025-A	Craig P. & Dona M. Sickels		1039 Durham Road	Durham	ME	04222
Durham	Androscoggin	009-025-B	Ryan Mildrum		469 Auburn Pownal Road	Durham	ME	04222
Durham	Androscoggin	009-025-C	Alfred Leung & Luilui Lui		21 Merrill Lane	Durham	ME	04222
Durham	Androscoggin	009-025-D	Karen L. & Kevin Cassidy		31 Merrill Lane	Durham	ME	04222
Durham	Androscoggin	009-025-E	Frank T. Conner		1069 Durham Road	Durham	ME	04222
Durham	Androscoggin	009-028	Deborah McBride	c/o Jonathan Morris	28 Durham Road	Durham	ME	04222
Durham	Androscoggin	009-029	Johnathan W. Morris		28 Durham Road	Pownal	ME	04069

NECEC - Durham 500' Abutters

Town	County	Map-Lot	Owner (1st Owner, Full Name)	Owner 2 (2nd+ Owner(s), Full Name)	Mailing Address	Mailing Town	Mailing State	Mailing ZIP
Durham	Androscoggin	009-030	Douglas E. & Pamela B. Schlichting &	Willow Schwarz	75 Joseph Mains Road	Woolwich	ME	04579
Durham	Androscoggin	010-026	John W. Talbot & Betsy A. Talbot		636 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	010-026	Lucille G. Bowie		638 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	012-017	Nicole M. Jones &	Scott R. Osgood	139 Bowen Road	Durham	ME	04222
Durham	Androscoggin	012-017-A	Raymond D. & Pamela J. Turgeon		89 Bowen Road	Durham	ME	04222
Durham	Androscoggin	012-017-B	David Lemieux &	Gina Kempner	73 Bowen Road	Durham	ME	04222
Durham	Androscoggin	012-017-C	Benjamin R. Turgeon		101 Bowen Road	Durham	ME	04222
Durham	Androscoggin	012-018	The Patricia E. Schwartz Trust	c/o Patricia E. Schwartz	187 High Street	Exeter	NH	03833
Durham	Androscoggin	012-023	Michael Copp		190 Pinkham Brook Road	Durham	ME	04222
Durham	Androscoggin	012-023-A	Michael Copp		190 Pinkham Brook Road	Durham	ME	04222
Durham	Androscoggin	012-024-A	Paul W. & Linda L. Bowie		22 Cloutier Road	Durham	ME	04222
Durham	Androscoggin	012-024-B	Thomas K. Bowie		32 Cloutier Road	Durham	ME	04222
Durham	Androscoggin	012-024-C	Thomas K. Bowie		32 Cloutier Road	Durham	ME	04222
Durham	Androscoggin	012-026	Selina Christiansen		23 Cloutier Road	Durham	ME	04222
Durham	Androscoggin	012-026-A	Gina & Brea Ashley Keith &	Natasha Rae Skelton	15 Davis Road	Durham	ME	04222
Durham	Androscoggin	012-026-B	Hannah J. & David B. Hall		35 Cloutier Road	Durham	ME	04222
Durham	Androscoggin	012-030	Carlene Spencer		P.O. Box 813	Newport	VT	05855
Durham	Androscoggin	012-032	Glenys King		163 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	012-035	Dana Bradstreet		19 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-002	Mainely Woods, LLC		79 Glen Road	Yarmouth	ME	04096
Durham	Androscoggin	013-003	Eric C. Bowie		636 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-004	Joseph & Melissa Lemont		601 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-004-A	Jack Bruce		597 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-004-C	Leo Morrisette		617 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-004-D	Corey A. & Nicole A. Bouyea		625 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-004-E	Keith Higgins, Jr.		734 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-004-F	Keith Higgins, Jr.		734 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-004-G	Keith Higgins, Jr.		569 Stackpole Road	Durham	ME	04222
Durham	Androscoggin	013-008-A	Marcus A. Baldwin		P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-008-B	Mr. Baldwin, LLC.	c/o Marcus Baldwin, PR	P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-008-C	Marcus A. Baldwin		P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-008-D	Stephen & Anna Racioppi		88 Granite Farm Hill Road	Durham	ME	04222
Durham	Androscoggin	013-008-E	Stephen & Anna Racioppi		88 Granite Farm Hill Road	Durham	ME	04222
Durham	Androscoggin	013-008-F	Marcus A. Baldwin		P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-008-G	Marcus A. Baldwin		P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-008-H	Marcus A. Baldwin		P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-008-J	Marcus A. Baldwin		P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-008-K	Marcus A. Baldwin		P.O. Box 755	Biddeford	ME	04005
Durham	Androscoggin	013-009-C	Joseph C. & Julie K. Bernard		57 Granite Farm Hill Road	Durham	ME	04222
Durham	Androscoggin	013-009-F	Dustin Vining		17 Granite Farm Hill Road	Durham	ME	04222
Durham	Androscoggin	013-009-H	Richard Frank		PO Box 6584	Scarborough	ME	04070
Durham	Androscoggin		Mitchell Newlin & John Newlin		30 E Coxon Road	Brunswick	ME	04011

NECEC - Durham 500' Abutters

Town	County	Map-Lot	Owner (1st Owner, Full Name)	Owner 2 (2nd+ Owner(s), Full Name)	Mailing Address	Mailing Town	Mailing State	Mailing ZIP
Durham	Androscoggin	013-011	Megan F. Huber		12 Bowen Road	Durham	ME	04222
Durham	Androscoggin	013-013	Lonna Bowie		130 Bowen Road	Durham	ME	04222
Durham	Androscoggin	013-014	The Patricia E. Schwartz Trust	c/o Patricia E. Schwartz	187 High Street	Exeter	NH	03833



February 22, 2024

Dear Neighbor,

Central Maine Power Company (CMP) intends to file an application with the Durham Planning Board on or about February 20, 2024 requesting approval under the Conditional Use Ordinance, Site Plan Review Ordinance, Shoreland Zoning Ordinance, and Floodplain Management Ordinance. In accordance with the Conditional Use and Site Plan Review and Ordinances, the purpose of this letter is to notify you, as an abutting landowner, of CMP's intent to file its application and of the upcoming meeting with the Durham Planning Board to consider this application. The application proposes to rebuild and rerate two existing transmission lines, respectively, that pass through Durham.

This application, which will be available to the public at the Durham Town Office upon filing, describes CMP's proposed rebuild of existing transmission line Section 62 and rerate of existing transmission line Section 64 (i.e., replacement of select poles with new poles of the same configuration in the same location) is required for interconnection of the New England Clean Energy Connect Project to the existing New England transmission system in accordance with requirements of the Tariff of ISO-New England Inc. (ISO-NE). These proposed upgrades will be completed entirely on land that CMP owns in fee, within an existing transmission line corridor.

The application will be considered at the next meeting of the Durham Planning Board on March 6, 2024 at 6:30 p.m. at the Durham Town Office, 630 Hollowell Road. The Planning Board's March 6, 2024 meeting is open to the public, and you are invited to attend.

If you have any questions about the project or would like to speak to someone about the proposal, please call us at **888-267-0831** or email us at outreach@cmpco.com.

Sincerely,

Central Maine Power Company



CREATE AMAZING.

