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December 18, 2025

Sent via email only

Board of Environmental Protection
c/o Board Clerk
17 State House Station
Augusta, ME 04333-0017
Clerk.BEP@maine.gov

RE: NRCM, Maine Audubon, AMC, and TU appeal from Department Order #L-027625-0003 (NECEC Condition Compliance Approval)

Dear Board Members,

On behalf of the Natural Resources Council of Maine ("NRCM"), Maine Audubon, the Appalachian Mountain Club ("AMC"), and Trout Unlimited ("TU"), enclosed for filing please find Appeal from Department Order #L-027625-0003 approving NECEC Transmission, LLC's Conservation Plan submitted pursuant to Special Condition # 39 of the Order approving NECEC Transmission's application for approval to develop the New England Clean Energy Connect transmission project under the Site Location of Development Act and the Natural Resources Protection Act.

The following Exhibits are also attached.

- **Exhibit A**: NECEC Trans. LLC, L-027625-003, Order Approving Conservation Plan (Me. D.E.P. Nov. 18, 2025)
- **Exhibit B**: Cent. Me. Power Co., 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, Findings of Fact and Order (Me. D.E.P. May 11, 2020)
- **Exhibit C:** Cent. Me. Power Co., L-27625-26-F-Z/L-27625-TG-G-Z/L-27625-2C-H-Z/L-27625-VP-I-Z/ L-27625-IW-J-Z/L-27625-26-AB-Z, Findings of Fact and Order (Me. B.E.P. July 22, 2022)
- **Exhibit D:** NECEC Transmission LLC, Revised Conservation Plan (May 9, 2025)
- **Exhibit D-1**: NECEC Transmission, LLC, Final Conservation Easement (Oct. 7, 2025)
- **Exhibit D-2**: NECEC Transmission, LLC, Final Forest Management Plan (Oct. 24, 2025)
- **Exhibit E**: Joint Comments of NRCM, AMC, Maine Audubon, and TU (June 12, 2025)
- **Exhibit F**: Joint Comments of NRCM, AMC, Maine Audubon, and TU (Oct. 24, 2025)
- **Exhibit G**: Joint Comments of NRCM, AMC, and Maine Audubon on Draft Order (Nov. 12, 2025)
- **Exhibit H**: Comments of the Bureau of Parks and Lands (June 13, 2025)
- **Exhibit I**: Comments of Department of Inland Fisheries and Wildlife (June 13, 2025)
- **Exhibit J**: Comments of Maine Natural Areas Program (June 12, 2025)

- **Exhibit K**: Comments of Dr. John Hagan o/b/o Our Climate Common (June 13, 2025)
- **Exhibit L**: Comments of Robert Bryan (June 12, 2025)
- **Exhibit M**: Cent. Me. Power Co., 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, First Procedural Order (Me. D.E.P. Aug. 13, 2018)
- **Exhibit N**: Proposed Order Affirming with New Conditions.

Thank you for your attention to this matter.

Sincerely,



Benjamin B. Algeo

Cc: NRCM, Maine Audubon, AMC, and TU
Licensee
Maine Department of Environmental Protection
Intervenors and Interested Parties:

Maine Office of the Public Advocate
Maine Department of Inland Fisheries and Wildlife
Maine Natural Areas Program
Maine Bureau of Parks and Lands
Maine Historic Preservation Commission
U.S. Department of Energy
U.S. Army Corps of Engineers
Industrial Energy Consumer Group
West Forks Plantation
Western Maine Mountains and Rivers Corp.
Friends of Boundary Mountains
The Nature Conservancy
Kennebec River Anglers
Maine State Chamber of Commerce
Edwin Buzzel
Elizabeth Boepple
Town of Caratunk
Conservation Law Foundation
Maine Guide Service
Gerald Petrucelli
NextEra Energy Resources
Wagner Foerst Management
Maine Wilderness Guides
Hawk's Nest Lodge
Stacy Laughton
International Brotherhood of Electrical Workers

STATE OF MAINE
BOARD OF ENVIRONMENTAL PROTECTION

IN THE MATTER OF

NECEC TRANSMISSION LLC Somerset and Franklin Counties Conservation Plan L-027625-003	**NATURAL RESOURCES COUNCIL OF MAINE, MAINE AUDUBON, APPALACHIAN MOUNTAIN CLUB, AND TROUT UNLIMITED APPEAL FROM DEPARTMENT'S ORDER APPROVING CONSERVATION PLAN**

The Natural Resources Council of Maine ("NRCM"), Maine Audubon, the Appalachian Mountain Club ("AMC"), and Trout Unlimited ("TU" and collectively, the "Appellants") hereby appeal from the Department of Environmental Protection's (the "Department's") Order[1] approving the Conservation Plan (the "Plan") submitted by NECEC Transmission, LLC ("NECEC") to satisfy conditions in a permit (the "Permit")[2] authorizing NECEC's transmission corridor (the "Corridor").

INTRODUCTION

The Plan does not "promot[e] habitat connectivity and conservation of mature forests," and therefore fails to satisfy the conditions imposed by the Department and the Board of Environmental Protection (the "Board"). The Plan consists solely of a conservation easement over heavily harvested land the vast majority of which is subject to ongoing harvesting, and thus fails to meet the Board's specific directive that "standard sustainable forestry operations commonly allowed in

[1] *NECEC Trans. LLC*, L-027625-003, Order Approving Conservation Plan (Me. D.E.P. Nov. 18, 2025) (attached as **Exhibit A**).

[2] *Cent. Me. Power Co.*, L-27625-26-A-N/L-27625-TG-B-N/L-27625-2wC-C-N/L-27625-VP-D-N/L-27625-IW-E-N, Findings of Fact and Order at 81 (Me. D.E.P. May 11, 2020) (attached as **Exhibit B**) *affirmed with conditions by Cent. Me. Power Co.*, L-27625-26-F-Z/L-27625-TG-G-Z/L-27625-2C-H-Z/L-27625-VP-I-Z/ L-27625-IW-J-Z/L-27625-26-AB-Z, Findings of Fact and Order (Me. B.E.P. July 22, 2022) (attached as **Exhibit C**).

areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan." It inexplicably counts two undersized forest blocks that which do not meet the requirement to be "at least 5,000 acres" and do not qualify for the stated exceptions to that requirement. Furthermore, it will be at least forty years—a full generation—before there is much, if any, "mature forest" (even using the Plan's flawed definition), despite the already existing ecological harm caused by the Corridor, which the Plan was required to mitigate.

Every agency that has commented on this Plan—and the Department itself—has suggested that this approach to mature forest protection should not serve as precedent in future proceedings. But there is no way around it: this is a precedential project. It has already set several precedents—including at the Maine Supreme Court.[3]

The only way to avoid bad precedent is to not set it in the first place. If sustained, the Department's Order approving the Plan will be a glaring and unavoidable precedent for substandard mitigation. The Board cannot let that happen.

The Board should therefore reverse the Department's Order approving the Plan and remand for further proceedings or, alternatively, modify it to require NECEC to (1) purchase and conserve an additional 10,000 acres with substantially more mature forest, (2) adopt an ecologically defensible definition of "mature forest," maintain and enhance existing patches of mature forest, and (3) set aside an additional 10,000 acres within the Easement Area to be managed for mature forest growth in perpetuity.[4]

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[3] *See NextEra Energy Res., LLC v. Maine Pub. Utilities Comm'n*, 2020 ME 34, 227 A.3d 1117; *Avangrid Networks, Inc. v. Sec'y of State*, 2020 ME 109, 237 A.3d 882; *NECEC Transmission LLC v. Bureau of Parks & Lands*, 2022 ME 48, 281 A.3d 618; *Black v. Bureau of Parks & Lands*, 2022 ME 58, 288 A.3d 346.

[4] Appellants have not requested a stay and are not requesting that NECEC's operations be curbed during or following this appeal. Rather, the appeal is entirely about the mitigation measures that NECEC is required to meet to address the fragmenting impacts of the project.

BACKGROUND

On May 11, 2020, the Department conditionally approved the Permit.[5] Special Condition 39 of the Permit provides:

> 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 [of the Corridor].

In turn, Section 7(D)(2)(a)(3) provides that this Conservation Plan must, among other requirements:

- Establish as its primary goal the compensation for the fragmenting effect of the [Corridor] 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; [and]
- 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[.]

On subsequent appeal, the Board affirmed the Department but imposed a few additional conditions.[6] One of the Board's conditions required that the Conservation Plan conserve an additional 10,000 acres, for a total of 50,000 acres.[7] The Board also clarified that "standard

[5] *See* **Exhibit B**. Central Maine Power originally applied for the Permit and later transferred it to NECEC. *See* **Exhibit A** at 1.

[6] *See* **Exhibit C.**

[7] **Exhibit C** at 77.

sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan."[8]

NECEC proposed the Plan to satisfy Condition 39, as modified by the Board.[9] The Plan would establish a conservation easement on 50,063 acres of land owned by the Weyerhaeuser Company near the Corridor (the "Easement Area").[10] It will take more than four decades – until 2065 – for even 50% of the Easement Area to meet the Plan's definition of "mature forest."[11] That portion will grow slowly over the course of decades until it reaches 50% of the Easement Area in 2065.[12] The Plan defines "mature forest" as

> a forest stand consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees.[13]

The Corridor, a smaller transmission line, and Route 201 all intersect the Easement Area.[14] Accordingly, 1,909 acres of the Easement Area would be "edge habitat" impacted by those developments.[15] Relatedly—and despite the Department's directive to conserve areas of "at least

[8] **Exhibit C** at 57.

[9] NECEC submitted a Conservation Plan to the Department on November 15, 2021, and a revised Conservation Plan on May 9, 2025. *See* **Exhibit D** (revised Conservation Plan). NECEC thereafter updated the proposed Conservation Easement and the Forest Management Plan that it had submitted with the revised Conservation Plan. *See* **Exhibit D-1** (Updated Proposed Conservation Easement); **Exhibit D-2** (Updated Forest Management Plan). The "Plan" at issue in this Appeal therefore includes **Exhibits D**, **D-1**, and **D-2**.

[10] *See* **Exhibit A** at 3.

[11] *See* **Exhibit A** at 5.

[12] *See* **Exhibit A** at 10.

[13] **Exhibit A** at 9; **Exhibit D-1** at 3.

[14] **Exhibit A** at 4.

[15] In its Order approving the Permit, the Department found that areas within 330 feet of the Corridor are "edge habitat" impacted by the Corridor. *See* **Exhibit B** at 80. The 1909-acre figure applies the same calculation to the other transmission line that bisects the Easement Area and to Route 201. *See* **Exhibit A** at 3.

5,000 acres"—the Easement Area includes two blocks of land immediately adjacent to the Corridor that are under 5,000 acres (even considering existing conserved land) and do not uniquely contribute to the goals of the Conservation Plan.[16] The Appellants and the Department identify these blocks as Areas E3 and E4.[17]

Appellants,[18] the Maine Bureau of Parks and Lands ("BPL"),[19] the Maine Department of Inland Fisheries and Wildlife ("MDIFW"),[20] the Maine Natural Areas Program ("MNAP"),[21] and many other individuals and organizations commented on the Plan. Commenters raised several concerns about the Plan:

Failure to Achieve Primary Conservation Goals: The Plan does not achieve the "primary goal" of "promoting habitat connectivity and conservation of mature forest areas."[22] The Easement Area is one of the most heavily harvested parts of Maine's Unorganized Territories, containing very little ecologically mature forest.[23]

Flawed Definition of "Mature Forest": The Plan employs a definition of "mature forest" that, according to ecologist Dr. John Hagan's unrefuted comments, "does not pass the ecological straight-face test."[24] Licensed forester Robert Bryan similarly commented that the forests the Plan

[16] **Exhibit A** at 4-5.

[17] *Id.*

[18] *See* Joint Comments of NRCM, AMC, Maine Audubon, and TU (June 12, 2025) (attached as **Exhibit E**); Joint Comments of NRCM, AMC, Maine Audubon, and TU (Oct. 24, 2025) (attached as **Exhibit F**); Joint Comments of NRCM, AMC, and Maine Audubon on Draft Order (Nov. 12, 2025) (attached as **Exhibit G**).

[19] *See* BPL Comments (June 13, 2025) (attached as **Exhibit H**).

[20] *See* DIFW Comments (June 13, 2025) (attached as **Exhibit I**).

[21] *See* MNAP Comments (June 12, 2025) (attached as **Exhibit J**).

[22] *See* **Exhibit B** at 81; **Exhibit G** at 12-13.

[23] *See, e.g.*, **Exhibit G** at 1-5.

[24] Dr. John Hagan Comments at 1 (June 12, 2025) (attached as **Exhibit K**).

defines as "mature" are in fact "far from being mature."[25] Tellingly, the commenting state agencies all agreed that the Plan's definition of mature forest should not serve as precedent in future cases.[26]

***Failure to Conserve 5,000-acre blocks*:** The Plan "conserves" two unremarkable blocks under 5,000 acres, which do not contain unique features that would further the goals of the Plan. To the contrary, these substandard blocks directly abut the Corridor and thus suffer from the very fragmenting impacts that the Plan is supposed to mitigate.[27]

***Delayed Mitigation to Compensate for Immediate Impacts*:** Under the Plan, the overwhelming majority of the Easement Area will not be "mature forest" (under the Plan's substandard definition) until 2065.[28] During this unprecedented delay mitigating for the fragmenting impacts of the Corridor, NECEC will operate a transmission project on the Corridor and generate the impacts that the Plan is supposed to mitigate.[29]

Despite these apparent shortcomings, the Department approved the Plan on November 18, 2025.[30]

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[25] Robert Bryan Comments at 1 (June 12, 2025) (attached as **Exhibit L**).

[26] *See* **Exhibit H** at 2 ("The mature forest definition used here should not be considered a precedent in other regulatory proceedings requiring mature forest."); **Exhibit I** at 2 ("Ultimately, it is . . . [MDIFW]'s position that if 50 feet is approved, it should be clear that 50 feet applies to this Plan only and should not be considered a precedent for future mitigation parcels requiring mature forests."); **Exhibit J** at 2 ("MNAP recommends that the definition of mature forest used in the Plan not be used as a precedent for working forest easements.").

[27] *See, e.g.*, **Exhibit E** at 2-3.

[28] *See, e.g.*, **Exhibit F** at 5.

[29] *See, e.g.*, **Exhibit E** at 6; *see also* **Exhibit B** at 106 (explaining that the Corridor's current contracts are valid for 20 years and that NECEC may renew those contracts).

[30] *See* **Exhibit A**. Appellants timely filed this appeal within "30 days of the date of a final license decision of the Commissioner." 06-096 C.M.R. ch. 2, § 23(A).

ARGUMENT

The Board should vacate the Department's Order approving the Plan or require additional mitigation. If permitted to stand in its current form, the Plan will be an unavoidable precedent conflating a working forest easement on a heavily harvested area with mature forest conservation, allowing mitigation measures to be delayed decades into the future for environmental impacts that have already occurred, counting land impacted by development toward mitigation of those same impacts, and allowing the permit holder to defy the Board's and the Department's clear directives.

A. Standing

As a threshold issue, are all "aggrieved persons" with standing to appeal from the Order approving the Plan.[31]

1. Natural Resources Council of Maine

"NRCM is an environmental advocacy group whose mission is protecting, conserving, and restoring Maine's environment."[32] It has members and supporters who reside, own and operate businesses, and recreate in Somerset County near the Easement Area.[33]

2. Maine Audubon

Maine Audubon is a nonprofit that "works to conserve Maine wildlife and wildlife habitat by engaging people in education, conservation, and action."[34] It has more than 30,000 members,

[31] 06-096 C.M.R. ch. 2, § 23(A). As shown is **Exhibits E, F, and G**, Appellants participated in Department proceedings on the Corridor and raised substantial evidence leading to Department implementation of the Plan requirement.

[32] *Black*, 2022 ME 58, ¶ 30, 288 A.3d 346 (and holding that NRCM had standing to appeal from BPL's decision to lease public lands for the Corridor).

[33] *See Cent. Me. Power Co.*, 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, First Procedural Order (Me. D.E.P. Aug. 13, 2018) (attached as **Exhibit M**) (granting NRCM petition to intervene in this proceeding); *see also* **Exhibit C** at 6 (finding that NRCM had standing to appeal from Department's initial approval of the Permit).

[34] *See Mission and Overview*, Maine Audubon (accessed Dec. 8, 2025) https://maineaudubon.org/about/mission-and-overview/.

supporters, and volunteers statewide. Its Western Maine Chapter includes 180 members living in Franklin and Somerset Counties, many of whom work or recreate in the North Woods.

3. Appalachian Mountain Club

AMC is a nonprofit that promotes the protection, enjoyment, and understanding of the outdoors. It has over 6,500 members who reside in Maine and owns 127,000 acres of forest land in Piscataquis County, which are managed for multiple uses including biological conservation, sustainable forestry, backcountry recreation and environmental education.[35] AMC's members live and work near and in the Easement Area.

4. Trout Unlimited

"TU is a national conservation organization whose mission is to conserve, protect and restore North America's trout and salmon and their watersheds" with 5 chapters and roughly 1,800 members in Maine. The Kennebec Valley chapter includes members in most of the area affected by the Corridor. "Most members of Trout Unlimited are anglers who enjoy fishing the waters that will be impacted by the [Corridor], as well as other recreation in the affected area."[36]

B. Merits

The myriad issues with the Plan boil down to two fundamental shortcomings: First, the Plan fails to comply with the "primary goal" imposed by the Department of providing "compensation for the fragmenting effect of the [Corridor] on habitat in the region of Segment 1 and the related edge effect by promoting habitat connectivity and conservation of mature forest areas" because it conserves very little mature forest and undermines habitat connectivity. Second, the Plan violates the Department's requirement that it provide for conservation of blocks of land that meet a minimum size of 5,000 acres.

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[35] *See* **Exhibit M** (granting AMC petition to intervene).

[36] *See* **Exhibit M** (granting TU petition to intervene).

1. The Plan Conserves Very Little Mature Forest and Fails to Promote Habitat Connectivity.

The Plan does exactly what the Board said it should not. It employs an easement permitting "standard sustainable forestry operations commonly allowed in areas subject to working forest easements" that fails to actually conserve mature forest.[37] It also fails to promote habitat connectivity. Several of the Plan's features contribute to these failures:

a. The Easement Area is Almost all Young and Intermediate Age Forest.

To start, the Easement Area is one of the most heavily harvested portions of the unorganized areas of Maine. Forest ecologist Dr. John Hagan estimated that just 0.2% of the Easement Area consists of late-successional and old-growth forest stands, which cover 3% of the unorganized areas as a whole.[38] And NECEC acknowledges that 60% of the Easement Area is forested by trees under 35 feet tall.[39] Growth-adjusted LiDAR data from 2016 indicates that this portion may be closer to 78%.[40] The LiDAR data further indicates that only 7% of the Easement Area is forested by trees over 50 feet tall,[41] which would meet at least the height component of the Plan's substandard "mature forest" definition.[42] In other words, very little of the forest the Plan proposes to conserve is currently mature.

b. The Plan Permits a "Shifting Mosaic" of Forestry Operations that Undermine its Purported Conservation Objectives.

Relatedly, the Plan allows very little of the forest in the Easement Area to grow to full maturity. The Plan will permanently protect from harvesting only about 2,400 acres, or 5% of the

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[37] **Exhibit C** at 57.

[38] *See* **Exhibit K** at 3.

[39] *See* **Exhibit D** at 12.

[40] *See* **Exhibit K** at 7.

[41] *Id.*

[42] *See* Argument Section 1(e) *infra*.

Easement Area, which lies within the riparian buffer.[43] The rest of the Easement Area will be subject to a "shifting mosaic" forest management regime that permits "clearcutting or other heavy harvesting [to] proceed at a sustainable rate of over 4,000 acres every ten years."[44] Robert Bryan, a licensed forester, described this approach as "essentially business as usual commercial forestry."[45]

Most of the small portion of the Easement Area that still contains ecologically mature forest will be fully available for harvesting, with 25% of these forests scheduled for harvesting within the next 12 years.[46] In other words, the already scarce ecologically mature forest in the Easement Area will steadily diminish over time and the forest outside of the riparian buffer will perpetually be harvested in a fashion that continually disrupts and eliminates mature forest habitat as forest areas within the Plan area meet or exceed 50 feet in height. That result is fundamentally inconsistent with the Department's and the Board's mandate to conserve mature forest areas, and with the Board's statement that "standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan."

c. The Plan Uses Delayed Mitigation to Offset Immediate Impacts from the Corridor.

The Plan delays most mitigation for nearly half a century, despite the fact that the impacts that the Plan is supposed to mitigate are occurring today. Under the Plan, less than 50% of the Easement Area capable of supporting mature forest will actually have "mature forest" (as the Plan

[43] **Exhibit A** at 13.

[44] **Exhibit L** at 3; *see* **Exhibit A** at 11-13.

[45] **Exhibit L** at 3.

[46] *See* **Exhibit K** at 1; **Exhibit D-2** at 20 (NECEC UKCE Footprint 2025 – 2037 Harvest Schedule by Period).

defines that term) before 2065.[47] This delayed mitigation is without precedent in Maine,[48] and it could have been avoided. If a significant portion of the Easement Area had included taller, older trees and existing mature forest habitat, the mitigation would have been concurrent with the Corridor's fragmentation impacts. As is, this 40-year delay, for an inadequate 50% benchmark, will not sufficiently compensate for the Corridor's impact on wildlife habitat, as this time period far exceeds the life span of much of that wildlife.

d. The Plan Fails to Conserve Wildlife Travel Corridors Between Mature Forest Habitats.

The Plan relies solely on riparian no-cut areas for travel corridors, despite the Department's requirement that it provide "wildlife travel corridors along riparian areas and between mature forest habitat." While this approach provides connectivity along riparian areas, it fails to connect those areas with upland mature forest areas, or to provide connectivity between upland mature forest areas.

Instead, the Plan subjects the areas between those upland mature forest areas, which are intersected by roads and transmission lines, to a "shifting mosaic" forest management. These features will present numerous hazards for wildlife trying to cross from one mature forest to another, reducing opportunities for movement across the landscape.[49]

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[47] *See* **Exhibit D-2** at 15.

[48] As precedent for this delayed mitigation, the Department pointed to compensatory mitigation programs for wetland impacts "that allow wetland restoration projects to be implemented over a period of years after the impact is permitted." **Exhibit A** at 10-11. But as Appellants pointed out to the Department, wetland mitigation is typically achieved through payment of fees in lieu of specific mitigation projects, and fee in lieu "projects usually take from 1-3 years to be completed, with monitoring of restoration projects required for 3-7 years." **Exhibit G** at 13. The Department provides no example of a compensatory mitigation project that was separated by many decades from the impacts of the project.

[49] *See* **Exhibit B** at 75-77 (discussing harms to wildlife due to fragmentation, including impacts to wildlife movement).

e. The Plan Relies on a Flawed Definition of "Mature Forest."

Finally, the Plan defines "mature forest" in a way that does not comport with the conservation objectives that the Plan is supposed to achieve. As Appellants explained to the Department, true mature forests that support "species preferring mature forest habitat" develop over the course of 100 years, or longer, and contain unique habitat features such as "three layers of vegetation composed of trees varying in age and size, dominant trees with [Diameter at Breast Height ("DBH")] values above 12-16 inches, large downed logs, large standing dead trees, pit-and-mound microtopography, and a well-developed leaf litter layer."[50]

The Plan tailors its definition of "mature forest" to the preferences of a single species, the pine marten, and relies on simplistic metrics such as tree height and basal area.[51] But even within those parameters, the Plan's "mature forest" definition falls short.[52] Dr. Hagan commented that a better definition of "mature forest would have a basal area of at least 120 sq. ft./acre and trees at least 60 ft tall."[53]

The commenting state agencies acquiesced to the Plan's definition of "mature forest" only subject to the caveat that it should not serve as precedent in future cases. The Department adopted this approach in its Order approving the Plan, which acknowledges that "[p]ine marten habitat is not equivalent to late-successional or old growth forest, and future regulators considering mitigation for development of forest habitats are not obligated to focus on pine marten habitat."[54]

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[50] **Exhibit E** at 8; *see also* Maine Audubon, *Forestry for Maine Birds* 53, 83-84 (2017), https://maineaudubon.org/wp-content/uploads/2017/12/FFMB-2017.pdf; **Exhibit K** at 2 n.1 (citing Forestry for Maine Birds).

[51] **Exhibit A** at 9; **Exhibit D** at 4.

[52] The photographs provided at page 4 of Appellants November 12, 2025, comments to the Department (**Exhibit G**) illustrate the difference between ecologically mature forest and the forest stands within the Easement Area that currently meet the Plan's definition of "mature forest."

[53] **Exhibit K** at 1.

[54] **Exhibit A** at 10.

But the Department also had no obligation to focus solely on pine marten habitat here.[55] Its decision to accept this definition of "mature forest" here is unavoidably precedential. It is unreasonable to expect that in the future, the Department will not be able to tell other applicants that this heavily litigated matter that occupied the media and the Department for years is not precedential.[56] If there is any principled reason for applying a more lenient approach to NECEC's Plan than to future developers' conservation plans, Appellants have not found it in this record. If anything, the need to mitigate the Corridor's fragmenting effect on a "largely unfragmented forest block" of "more than 500,000 acres" in "one of the world's last remaining contiguous temperate broadleaf-mixed forests," which "supports exceptional biodiversity," demands a more rigorous approach.[57]

The Department's attempt to limit the precedential effect of the Plan's substandard definition of "mature forest" betrays the fundamental shortcomings of that definition. If agencies should not use that definition as precedent in the future, the Department should not endorse its use in the Plan. The Board should either remand to the Department to require an ecologically defensible definition of "mature forest," or impose one directly as a modification to the Department's Order.

[55] While the Department did identify pine marten as an important "umbrella species," meaning that "planning for marten often serves the purpose of planning for a wide range of other wildlife," that finding did not prevent the Department from considering whether the Plan in fact serves the needs of other species. **Exhibit B** at 77.

[56] *See, e.g.*, *Cassidy Holdings, LLC v. Aroostook Cnty. Commissioners*, 2023 ME 69, ¶ 16 n.4, 304 A.3d 259.

[57] **Exhibit B** at 75.

2. The Plan Fails to Meet the 50,000-acre Requirement Through Large Forest Blocks.

The Plan also clearly violates the Board's and the Department's unambiguous directives. NECEC was required to "permanently conserve [5]0,000 acres in the vicinity of Segment 1 [of the Corridor]" and "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."[58] Despite these requirements, the Plan includes two blocks that do not meet the 5,000 acre minimum size. These block (Blocks E3 and E4) are directly adjacent to the Corridor, and do not fall within any exception to the 5,000-acre rule.

Blocks E3 and E4 do not fall under the "adjacent to existing conserved land" exception because, when the acreage of adjacent conserved lands are added to those blocks, they still fall under 5,000 acres.[59] And in addition to bordering the Corridor itself, they also border other fragmenting features, including Route 201 and another transmission line. For the purposes of mitigating the fragmenting impacts of the Corridor, "adjacent to existing conserved land" cannot possibly mean separated from conserved land by additional fragmenting features.

Nor are these two blocks "uniquely appropriate to further the goals of the Conservation Plan." A sub-5,000-acre parcel might be "uniquely appropriate" to further the Plan if it had distinct ecological features, not found on other parcels in the Easement Area, that provided conservation benefits that the Plan might otherwise lack. But the Department concluded that the two smaller parcels qualify because "excluding the areas immediately adjacent to the [Corridor], Route 201, and the east-west transmission line from the conservation area would leave these areas eligible for

[58] **Exhibit B** at 81; **Exhibit C** at 77.

[59] **Exhibit D** at 11; *see* **Exhibit E** at 7.

development." [60] This cannot meet a standard of "uniquely appropriate" since it would equally apply to any other parcel along the entire 53-mile Segment 1 portion of the Corridor or along any other fragmenting feature (road or transmission line) within the nearly 7-million-acre Area of Interest that NECEC evaluated for large block conservation options.[61]

The Department also posited that failure to conserve the sub-5,000 acre parcels adjacent to the Corridor could "exacerbate" the Corridor's "fragmenting effect."[62] That is exactly backwards.

As the Department acknowledged in its Order approving the Permit, "fragmentation occurs when contiguous habitat is broken into smaller, more isolated patches."[63] Because the Corridor already fragments the landscape, any development directly adjacent to the Corridor would cause *less* additional fragmentation than development within the interior of the nearby large habitat blocks that NECEC was supposed to conserve.

Because these small parcels do not meet the Department's and the Board's clear directives, they cannot count toward the acreage for the Plan. And without these small parcels, the Plan fails to meet the Department's and Board's most unambiguous requirement of conserving 50,000 acres.

C. Remedy

If the Board agrees with Appellants that the Plan is deficient, it has two options. It may simply reverse the Department's Order approving the Plan and remand for further proceedings addressed to the issues raised herein.[64] Reversal and remand would allow the Department to

[60] **Exhibit A** at 4.

[61] *See* **Exhibit G** at 6.

[62] **Exhibit A** at 5.

[63] **Exhibit B** at 76.

[64] 06-096 C.M.R. 2, § 23(J).

reopen the record and consider an alternate proposal from NECEC.[65] That is an appropriate remedy under these circumstances, as it would allow the Department to address the full suite of issues raised in this appeal.

However, if the Board does not want to completely reverse the Department, it could "affirm all or part of the decision of the Commissioner with modifications, or new or additional conditions."[66] Appellants propose modifications to simply re-affirm what the Board has already said.[67] These modifications could be in the form of new conditions[68] requiring NECEC to:

1. Purchase (in fee, not a conservation easement) at least an additional 10,000 acres to be owned and permanently managed as mature forest by BPL or a conservation organization.

2. Adopt a new, ecologically defensible definition of "mature forest" that applies to the entire Easement Area and prepare a new forest management plan that adheres to that definition.

3. Create, within the Easement Area, a Special Management Area or Areas of at least 10,000 acres and consisting of no more than two contiguous blocks of at least 5,000 acres each, to be permanently managed as mature forest (as defined above), not subject to the shifting mosaic approach. This Special Management Area or Areas should be in addition to the mature forest riparian buffers and could include some of the remaining late-successional and old growth forests on site now.

4. Establish additional no-cut areas and/or strict harvesting limitations in and around the little remaining ecologically mature forest within the Easement Area that will maintain those

[65] More recent working forest easements, such as the Kennebago Conservation Easement, provide a better template that NECEC should have followed. *See* **Exhibit G** at 13-14; **Exhibit F** App. C.

[66] *Id.*

[67] Appellants made a similar proposal to the Department. *See* **Exhibit G** at 14.

[68] A proposed order suggesting how the Board might impose these conditions is attached for consideration as **Exhibit N**. The Board is, of course, free to fashion relief in any manner it sees fit.

areas as mature forest indefinitely. These areas could either remain under Weyerhaeuser's management (if identified in the easement and ecological or forest management plan) or be transferred to another conservation owner.

Satisfaction of these conditions would result in the conservation of 50,000 acres of mature forest, which is the standard that the Department set for the Plan.

CONCLUSION

For the forgoing reasons, Appellants the Natural Resources Council of Maine, Maine Audubon, Appalachian Mountain Club, and Trout Unlimited respectfully request that the Board reverse the Department's Order approving NECEC Transmission LLC's Conservation Plan and remand with instructions to require an ecologically defensible definition of "mature forest," exclude Blocks E4 and E5 from counting toward the 50,000 acre requirement, and make other changes necessary to remedy the issues identified herein or, alternatively, affirm with the new conditions as described above.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

Respectfully submitted this 18th day of December, 2025;



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EXHIBIT A

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

DEPARTMENT ORDER

IN THE MATTER OF

NECEC TRANSMISSION LLC	) SITE LOCATION OF DEVELOPMENT ACT
Somerset and Franklin Counties	)
CONSERVATION PLAN	)
L-027625-0003 (approval)	) CONDITION COMPLIANCE

Pursuant to the provisions of 38 M.R.S. §§ 481–489-E, the Department of Environmental Protection (Department) has considered the application of NECEC TRANSMISSION LLC (Applicant) with the supportive data, agency review comments, public comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. In Department Order #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 dated May 11, 2020 (Department Order), the Department approved the applications of Central Maine Power Company to develop the New England Clean Energy Connect transmission project (NECEC Project) under the Site Location of Development Act and Natural Resources Protection Act. In Department Order #L-27625-26-K-T, dated December 4, 2020, the Department approved a partial transfer of the permit from Central Maine Power Company to NECEC Transmission LLC.

   In Board of Environmental Protection (Board) Order #L-27625-26-F-Z/L-27625-TG-G-Z/L-27625-2C-H-Z/L-27625-VP-I-Z/ L-27625-IW-J-Z/L-27625-26-AB-Z, dated July 21, 2022 (Board Order), the Board affirmed #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, along with additional special conditions, and affirmed the partial transfer issued in Department Order #L-27625-26-K-T.

2. Special Condition #39 of the Department Order reads as follows: "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 [of the NECEC Project]. 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[al] 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."

Section 7(D)(2)(a)(3) of the Department Order reads, in relevant additive part, "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 [of] 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."

Special Condition #10 of the Board Order reads as follows: "The Conservation Plan required by Special Condition 39 of the Department Order is amended to require permanent conservation of 50,000 acres in the vicinity of Segment 1."

The Board Order also states, in Section 10(B)(8)(b): "While…commercial timber operations are not expressly precluded, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan."

3. On November 15, 2021, Applicant submitted a Conservation Plan to the Department pursuant to Special Condition #39 of the Department Order. The processing of this condition compliance application was tolled during the suspension of the Department Order between November 23, 2021 and May 15, 2023. On May 9, 2025, Applicant revised the November 15, 2021 condition compliance application by submitting a revised proposed Conservation Plan to conserve 50,000 acres in the vicinity of Segment 1 (proposed Conservation Plan) pursuant to Special Condition #39 of the Department Order and Special Condition #10 of the Board Order. The revised application included an initial draft Conservation Easement to implement the proposed Conservation Plan. In response to comments, Applicant submitted a revised proposed Conservation Easement on August 1, 2025, followed by a final revised proposed Conservation Easement on October 7, 2025

(proposed Conservation Easement). Applicant submitted an initial Forest Management Plan on July 16, 2025, and a revised Forest Management Plan on October 24, 2025 (proposed Forest Management Plan).

4. The Department solicited comments on the application from state natural resource agencies, intervenors in previous Department and Board proceedings on the NECEC Project, and the public. The Department requested initial comments on the proposed Conservation Plan by June 13, 2025; however, the Department continued to accept comments on all application submissions throughout the application processing period. The Department issued a draft order for comment on November 4, 2025. The Department received comments on the application and draft order from a total of 285 organizations and members of the public. The Department also received comments from the Department of Inland Fisheries and Wildlife (MDIFW), the Bureau of Parks and Lands (BPL), and the Maine Natural Areas Program (MNAP). Applicant provided a response to comments dated August 1, 2025 and comments on the draft order dated November 12, 2025. All comments pertinent to licensing criteria are addressed in this order.

5. The proposed Conservation Plan would permanently conserve 50,063 acres of land owned by Weyerhaeuser Company (proposed conservation area) in Bradstreet Township, Johnson Mountain Township, Parlin Pond Township, and West Forks Plantation, as depicted in Figure 1 of the proposed Conservation Plan. The proposed Conservation Plan would conserve the land by encumbering it with a permanent working forest conservation easement.

6. BPL provided preliminary consent to hold the conservation easement in a letter to the Department dated May 5, 2025.

7. **Permanent conservation of 50,000 acres in the vicinity of Segment 1.**

The Department Order and Board Order (collectively the Orders) require permanent conservation of 50,000 acres in the vicinity of Segment 1 of the NECEC Project. Segment 1 bisects the 50,063-acre proposed conservation area.

In comments dated June 12, 2025, Natural Resources Council of Maine, Appalachian Mountain Club, Maine Council of Trout Unlimited, and Maine Audubon (Joint Commenters) noted that the NECEC Project, Route 201, and a smaller east-west transmission line cross the proposed conservation area. Joint Commenters stated that the edge effect created by these existing developments would result in the presence of approximately 1,909 acres of edge habitat within the proposed conservation area and argued that this edge habitat should not be counted toward the 50,000-acre requirement.

In comments dated June 13, 2025, The Nature Conservancy in Maine and Conservation Law Foundation (TNC and CLF) stated: “It is not appropriate to consider those portions of the proposed conservation area within 330’ of the NECEC line as adequate mitigation, given that those are the areas of impact from edge effects.”

In comments dated August 1, 2025, Applicant responded that "excluding from the [proposed conservation area] the areas immediately adjacent to the Project corridor would be inconsistent with the [Orders]. Not including that area would leave the strips of land bordering the Project corridor entirely unprotected, and open for development or unlimited forest harvest." Applicant also responded that the Department "significantly reduced [edge effect] impact by ordering 35-foot minimum height vegetation, full height vegetation, reduced clearing, and tapering [in the NECEC Project corridor]. These ordered mitigation measures expressly address the Joint Commenters' concerns regarding 'the creation of extensive permanent 'hard' edge along both sides of the new corridor.'"

The Department finds that excluding the areas immediately adjacent to the NECEC Project, Route 201, and the east-west transmission line from the conservation area would leave these areas eligible for development, which could exacerbate habitat fragmentation in the vicinity of Segment 1 in the future. The Department further finds that tapering and other measures designed to minimize habitat fragmentation from the NECEC Project will reduce the edge effects created by the corridor. The Department also finds that the Orders do not expressly preclude edge habitat from inclusion in the proposed conservation area.

The Department finds that the proposed Conservation Plan and proposed Conservation Easement, as conditioned by this order, will result in permanent conservation of at least 50,000 acres in the vicinity of Segment 1.

8. **Focus on large habitat blocks.**

The Orders require the Conservation Plan to have "a focus on large habitat blocks" and require that "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."

The 50,063 acres in the proposed conservation area are nearly contiguous on the landscape, as depicted in Figure 1 of the proposed Conservation Plan. Two portions of the proposed conservation area are separated from the remainder by the Cold Stream Conservation Easement, which is consistent with the Orders' allowance for inclusion of areas "adjacent to existing conserved land." As noted above, the NECEC Project, Route 201, and an east-west transmission line cross the proposed conservation area.

Joint Commenters stated that when the NECEC Project, Route 201, and east-west transmission line are considered, the proposed conservation area is comprised of six separate habitat blocks, two of which are smaller than 5,000 acres. Joint Commenters argued these two smaller blocks should be removed from the proposed Conservation Plan, and they identified the smaller blocks as portions "E3" and "E4" of the proposed conservation area in Exhibit C of their June 12, 2025 comments.

The Department notes that portions "E3" and "E4" would be part of larger 5,000-acre blocks if not for the presence of the NECEC Project corridor. If the Department required

"E3" and "E4" to be removed from the proposed conservation area, this land adjacent to the corridor would not be conserved and could be developed in the future. Development adjacent to the corridor would exacerbate its fragmenting effect. Removing these portions of land from the proposed conservation area may also work at cross purposes with the requirement to conserve land in the vicinity of Segment 1. Therefore, the Department finds that these portions of land within the proposed conservation area are uniquely appropriate to further the goals of the Conservation Plan.

The Department finds that, subject to the conditions of this order, the proposed Conservation Plan meets the requirement that "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."

9. **Conservation value of the land.**

The Orders require Applicant to "explain the conservation value of this land." The proposed Conservation Plan describes the conservation value of the proposed conservation area in Section 3.2.2, stating that the land has the following characteristics (among others):

- approximately 40% of the area contains trees currently 35 feet in height or taller and 13% of the proposed conservation area currently meets the proposed definition of mature forest;
- the area includes mapped Significant Wildlife Habitats, habitat for rare, threatened and endangered wildlife species, rare and exemplary natural communities, Maine Heritage Fish Waters, Wild Brook Trout Priority Conservation Areas, and extensive wetlands, streams, remote ponds and other water bodies; and
- the proposed conservation area "enhances and extends a large landscape of protected land due to its adjacency to existing conservation lands," as depicted in Figure 3 of the proposed Conservation Plan. The plan states that the proposed conservation area, "fills a conspicuous gap between [adjacent conserved] areas, creating almost 450,000 contiguous acres in conservation."

In a letter from MDIFW to Weyerhaeuser Company dated May 13, 2025, attached to comments from MNAP filed with the Department on June 12, 2025, MDFIW noted that the proposed conservation area contains confirmed habitat for several state-endangered and state-threatened species and special concern species, such as Bicknell's Thrush, Rusty Blackbird, and Roaring Brook Mayfly, as well as many other potential habitats for state-endangered and state-threatened species and special concern species. MDIFW's letter also confirmed the presence of Significant Wildlife Habitats and State Heritage Fish Waters. MNAP's comments stated, however, that "MNAP has not conducted targeted field inventories of" the proposed conservation area and was awaiting landowner permission to do so.

In comments dated June 13, 2025, BPL stated: "The proposed easement lies in a geography appropriate for the project: it is bisected by the transmission line, surrounds an existing Public Reserve Land (the Cold Stream Unit), and connects with adjacent landscape-scale conserved lands. As a result, the easement will promote habitat connections during NECEC operation and beyond the line's decommissioning."

TNC and CLF stated that the organizations, "appreciate that the [proposed Conservation Plan] represents an opportunity to secure permanent conservation of a block of over 50,000 acres in nearly contiguous parcels in the immediate vicinity of Segment 1, that also:

- Intends to secure permanent habitat connectivity between existing conserved lands around Attean Lake to the west and Cold Stream and Moosehead Lake to the east, substantially expanding upon and connecting these two large contiguous areas of conserved lands into a single expanse of almost 450,000 acres, and making an important contribution to maintaining large scale habitat connectivity;
- Establishes provisions for riparian habitat protection and wildlife travel corridors along perennial streams; and,
- Permanently conserves an area along the Route 201 corridor, preventing future development."

The Sportsman's Alliance of Maine (SAM) stated in comments supporting the proposed Conservation Plan, dated June 9, 2025, that "the largely contiguous 50,000 acres of conservation area proposed in the [Conservation] Plan and the property's adjacency to another 400,000+ acres of conserved land amplify the plan's forest and wildlife benefits…."

Dr. Paul Frederic stated in comments dated June 13, 2025, that the proposed conservation area "is contiguous to large existing blocks of conservation land in northwestern Maine" and "will enhance the historic ecological balance in the region to off-set negative impacts of the powerline construction."

Joint Commenters stated that their analysis of existing LiDAR data found that only 22% of the conservation area is comprised of trees 35 feet in height or taller, rather than 40%. Joint Commenters also stated that "only 0.2% of the proposed conservation area contains [late-successional or old growth] forest whereas the average across the greater Unorganized Territories in Maine is 3%." Joint Commenters further stated that "the proposed conservation area is one of the most heavily harvested landscapes in the last 20 years."

Jointly submitted comments from Senator Brenner, Senator Ingwersen, Senator Grohoski, Senator Carney, Senator Bennett, and Representative Gramlich (Legislative Commenters), dated June 13, 2025, stated that the proposed conservation area, "lies in one of the most heavily harvested regions in the unorganized territories."

Comments from 260 members of the public also stated that the land has been heavily logged and is fragmented by power lines and roads.

The Department acknowledges that the proposed conservation area is a working forest that currently supports substantial timber harvesting and is also fragmented by two transmission lines and Route 201. However, the Department finds that the geography of the proposed conservation area confers substantial conservation value to the land, as it will provide habitat connections between approximately 400,000 acres of additional conservation land to the west and the east. Additionally, the land contains many other valuable natural resources and mapped habitats that will be protected from future development by the proposed Conservation Easement. Moreover, the proposed conservation area contains the same type of forestland—working forest in the region of Segment 1—that the Department determined to have substantial enough value for habitat connectivity and mature forest species to require Applicant to compensate for impacts thereto with the proposed Conservation Plan.

The Department finds that, subject to the conditions of this order, Applicant has adequately explained the conservation value of the land.

10. **Primary goal of promoting habitat connectivity and conservation of mature forest areas**.

The Orders require that the Conservation Plan must "[e]stablish 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." The conservation area must be managed "to provide blocks of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitat." Further, the Orders clarify that "[w]hile…commercial timber operations are not expressly precluded, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan."

A. Promoting conservation of mature forest areas.

a. Definition of mature forest.

The draft conservation easement submitted by Applicant on May 9, 2025, defined "Mature Forest" as "50 foot or taller trees with a minimum basal area of 60 square feet per-acre containing a mix of native species, accompanied by the presence of representative levels of well distributed standing dead and downed trees."

MDIFW stated in comments dated June 13, 2025: "It is MDIFW's position that 50 feet in height meets the minimum goals of mature forest, recognizing that over time, most of the acreage in mature forest on the Mitigation Parcel will exceed this minimum. Ultimately, it is also MDIFW's position that if 50 feet is approved, it should be clear that 50 feet applies to this [proposed Conservation] Plan only and should not be considered a precedent for future mitigation parcels requiring mature forests."

Referring to agency consultations that preceded Applicant's submission of the proposed Conservation Plan, BPL commented: "Following numerous negotiations among NECEC [Transmission LLC], Weyerhaeuser [Company], [MDIFW], and [MNAP], discussions concluded with definitions of a minimum measurable and enforceable threshold for mature forest. The Bureau recognizes that most 'mature' forest stands in the easement will be taller than 50 feet and have a higher density than 60 square feet of basal area per acre. The Bureau also recognizes the unique circumstances associated with this conservation easement. The mature forest definition used here should not be considered a precedent in other regulatory proceedings requiring mature forest. In addition, other approaches to conserving mature forest and promoting habitat connectivity, including alternate definitions of mature forest, fee ownership by [BPL] or [M]DIFW, or the establishment of large set-aside reserves, are worthy of consideration."

Joint Commenters stated that the proposed Conservation Plan's definition of mature forest is flawed. They stated that the 50-foot height threshold is inadequate because several common tree species in the region can reach 60-100 feet at maturity. They stated that the basal area threshold is "severely inadequate" for several reasons, including that the recommended basal area of live trees and snags for American marten (pine marten) habitat in New England is at least 80 square feet per acre. Joint Commenters further stated that "more accurate thresholds for 'mature forest' would be a canopy height of at least 75 feet and a basal area of at least 110 ft^2/acre," but they recommend "a more comprehensive ecological definition of 'mature forest' using commonly measured forestry metrics [that] would include a combination of minimum volume (cords/acre), total basal area (ft^2/acre), and basal area or number of trees within specific [diameter at breast height] classes ranging from 12-16 inches (ft^2/acre or total number)," with criteria for these metrics that should vary by forest type.

MNAP commented that there are varying definitions of mature forest, but stated, "mature forest is not typically defined by height or basal area alone…. Characteristics including tree diameter, age, basal area, understory structure, composition of dead trees or decaying wood, and evidence of disturbance are also typically incorporated into the definition and description of mature forest." MNAP noted that the Society of American Foresters "defines trees or even aged stands as mature once the tree or stand has…attained most of its potential height growth…," which for spruce, hemlock and northern hardwoods ranges from 60-90-plus feet. MNAP recommended that, "the definition of mature forest used in the [proposed Conservation] Plan not be used as a precedent for working forest easements."

Dr. John Hagan, President and CEO of Our Climate Common (Hagan), stated in comments dated June 13, 2025, that the proposed definition of mature forest describes "partially-cut mid-age forest," not ecologically mature forest.

Robert Bryan, a licensed forester, stated in comments dated June 12, 2025, that the proposed definition of mature forest reflects "pole" or "mid-aged stands" that "are far from being mature."

Dr. Robert Seymour, Professor Emeritus of Silviculture at the University of Maine (Seymour), stated in comments dated June 13, 2025: "The use of forest height as a gauge of forest maturity is novel but scientifically well grounded, as tree heights are closely related to their ages. On average to good sites in this area, trees could reach 50 feet tall in 40 years, so by itself this is not a particularly rigorous benchmark. However, for large areas to be over this height, many acres would need to be much taller by the time they are harvested under any sustainable management strategy."

TNC and CLF stated that, "a minimum threshold [for defining mature forest] should be 55 foot or taller trees and 80 sq ft of basal area per acre."

At the request of the Department, Applicant submitted a revised easement (proposed Conservation Easement) on October 7, 2025, replacing the prior versions of the easement submitted on May 9, 2025 and August 1, 2025. The proposed Conservation Easement defines "Mature Forest" as "a forest stand consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees."

The Department finds that, subject to the conditions of this order, this definition of mature forest is sufficient to satisfy the requirements of the Orders. The Orders, and the underlying record of the NECEC proceedings, focus primarily on the habitat requirements of pine marten as an "umbrella" species whose habitat needs are representative of a wide range of other interior forest-dwelling species in Maine. Joint Commenters acknowledge that a minimum basal area of 80 square feet per acre of live trees and snags is appropriate for pine marten habitat in New England. The research literature referenced by Joint Commenters also states that pine marten require a minimum tree canopy height of 30 feet.[1] Therefore, the Department finds that the combination of a minimum 80 square feet per acre basal area of trees at least 4.5 inches in diameter at breast height, with a minimum basal area of 60 square feet per acre of trees at least 50 feet tall, together with additional standing and downed dead trees, would satisfy pine marten habitat requirements in most cases.

[1] High Branch Conservation Services and Plymouth State University, Guidelines for Managing American Marten Habitat in New York and Northern New England, https://rcngrants.org/sites/default/files/datasets/Compiled%20Guidelines%20for%20Managing%20Habitat%20for%20Regional%20SGCN%20in%20Norteastern%20and%20Mid-Atlantic%20Forests%20-%202017.pdf.

Pine marten habitat is not equivalent to late-successional or old growth forest, and future regulators considering mitigation for development of forest habitats are not obligated to focus on pine marten habitat. However, for the purposes of compliance with the Orders, the Department finds that habitat conditions suitable for pine marten are appropriately considered "mature forest" habitat conditions, and the Department finds that areas that meet the definition of "mature forest" in the proposed Conservation Easement are likely to contain such conditions.

b. Mature forest goal.

Section VII.A.6 of the proposed Conservation Easement requires that, "[a]t a minimum, Commercial Forest Management Activities must result in 50% of the Productive Forest Acres as identified in the Baseline Document and Forest Management Plan of the protected property [meeting the definition of Mature Forest] no later than December 31, 2065, and thereafter in perpetuity (the "Mature Forest Goal"). Progress toward the Mature Forest Goal will be made at the following rates: 13% in 2025, 20% in 2035, 30% in 2045, 40% in 2055, and 50% in 2065 (collectively, 'Milestones')." Section VII.E.1 of the proposed Conservation Easement allows existing plantations, which the proposed Conservation Easement defines as "stands that are artificially regenerated via intentional planting methods," to be counted as mature forest, but limits new plantations to a total of 4,000 acres at any one time and requires that new plantations may not count as mature forest.

Joint Commenters stated that the 50% target for mature forest is inadequate, arguing for a target of at least 75%. They also stated that the Mature Forest Goal does not propose to achieve 50% mature forest until 2065, and "from an ecological perspective, this lag-time in compensation is ineffective as all the species impacted by this fragmentation have lifecycles shorter than 40 years."

Sierra Club Maine, in comments dated June 13, 2025, also stated that the trajectory toward mature forest "may not align with the immediate and high-quality habitat compensation needed to truly offset the project's impacts under the terms of the Orders."

Ronald Joseph, in comments dated June 12, 2025, stated that plantation forestry should not be allowed in the proposed conservation area.

Cathy Johnson (Johnson), in comments dated June 12, 2025, stated that existing plantations should not be considered mature forest.

The Department finds that the Orders do not require specific numerical targets for mature forest area or preclude counting existing plantations as mature forest. While the proposed Conservation Easement allows 40 years to achieve the 50% Mature Forest Goal, this approach is not inconsistent with compensatory mitigation programs for wetland impacts that allow wetland restoration projects to

be implemented over a period of years after the impact is permitted. Just as it takes time for a wetland restoration project to be implemented, it will take time for trees to mature in the proposed conservation area. Additionally, development rights will be extinguished immediately, ensuring immediate protection of habitat connectivity in the proposed conservation area in perpetuity. The Department finds that compensation for the NECEC Project's habitat connectivity impacts will be provided in an appropriate timeframe.

Based on the definition of "Mature Forest" and the Mature Forest Goal in the proposed Conservation Easement, the Department finds that the proposed Conservation Plan, as conditioned by this order, will promote conservation of mature forest areas.

B. Providing blocks of habitat for species preferring mature forest habitat.

The proposed Conservation Plan intends to achieve the Mature Forest Goal through a "shifting mosaic" forest management strategy. Except for permanent 330-foot mature forest riparian buffers (see Finding 10(C) below), the proposed Conservation Plan allows for the location of mature forest in the proposed conservation area to shift over time, as long as at least 50% of the Productive Forest Acres are comprised of mature forest in 2065 and thereafter.

Joint Commenters oppose the shifting mosaic strategy. They note that 6,900 acres of mature forest would occur in the 330-foot riparian buffers, leaving approximately 18,100 acres of mature forest in the remaining approximately 43,100 acres of the proposed conservation area, with those 18,100 acres shifting over time. Joint Commenters stated: "This means that no one area will necessarily be maintained and managed as a 'mature forest' in the long term, greatly reducing and disrupting the vast variety of habitat features and benefits that accompany unmanaged mature forests," such as trees of varying age and size, large downed logs, large standing dead trees, pit-and-mound microtopography, and a well-developed leaf litter layer.

Legislative Commenters also stated that "almost no portion of the landscape will ever be allowed to grow to full maturity, which is essential for many species. This approach does not seem consistent with the Order's directive to protect habitat for species that prefer mature forest habitat."

TNC and CLF stated that "the shifting mosaic approach and 50% acreage requirement do not guarantee 'large blocks' of mature forest."

Many commenters also advocated that blocks of habitat for species preferring mature forest habitat should be provided through permanent no-harvest areas or fee acquisition of land.

Joint Commenters stated that "we believe that it will be essential for NECEC [Transmission] LLC to include a significant amount of fee acquisition in its Plan in

order to comply with the Orders," specifically recommending at least 15,000 to 20,000 acres of fee acquisition. Joint Commenters also recommended that no harvesting of existing late-successional or old growth forest should occur in the proposed conservation area. In supplemental comments dated October 24, 2025, Joint Commenters stated: "The Department should [o]rder NECEC to secure, at a minimum, 10,000 acres of forest with larger and older trees."

Legislative Commenters stated: "The [Conservation] Plan should provide no-cut boundaries around all existing older age class forest stands within the Plan area, including forest stands that are transitioning toward late successional forests," and that mature forest should be acquired through fee acquisition, specifically, "10,000 to 20,000 acres of fee acquisition elsewhere in the vicinity of Segment 1 that has a larger volume of existing mature forest stands, and would be managed for mature forest habitat."

Hagan stated that the proposed Conservation Plan should preclude harvesting of any existing late-successional or old-growth forest in the proposed conservation area.

Seymour stated that "a much better outcome would be fee ownership of land purchased for the Bureau of Parks and Lands."

Sierra Club Maine called for the proposed Conservation Plan to provide "intact, unharvested mature forest…."

Comments from 260 members of the public stated that the Conservation Plan should be revised to include no-harvest or fee acquisition areas, with almost all commenters specifically recommending the addition of 15,000 to 20,000 acres of such areas.

TNC and CLF stated: "Securing additional large blocks of future mature forest with no-cut areas would strengthen the Conservation Easement's alignment and compliance with the Orders," further stating that "we also urge that the Conservation Plan should include conservation of one or more additional ecologically significant parcels, preferably each of 5,000 acres or more and adjacent to existing conserved lands, that may include extensive mature forest now and that would have opportunity to develop into late successional / old growth forest under conservation management."

The Department agrees that the shifting mosaic forest management strategy will not guarantee "large blocks" of mature forest within the conservation area, as noted by TNC and CLF. However, the Department finds that the shifting mosaic strategy, in conjunction with the Mature Forest Goal, will guarantee blocks of habitat for species preferring mature forest habitat. This is consistent with the provisions of the Orders, which require the proposed conservation area(s) to be managed to "provide *blocks* of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitat" (emphasis added). The Orders' requirement to provide "large habitat blocks" is tied to the requirement that any

conservation area must be at least 5,000 acres, requiring Applicant to "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…." Compliance with this requirement is discussed above in Finding 8.

Further, although ever-shifting mature forest areas may not foster the forest complexity found in late-successional or old growth forests as noted by Joint Commenters, the Department finds that the approximately 18,100 acres of mature forest that will exist within the conservation area in 2065 and thereafter beyond the 330-foot riparian buffers, in addition to the approximately 6,900 acres that will occur within the riparian buffers, should provide suitable habitat for pine marten, an umbrella species preferring mature forest habitat, as discussed above in Finding 10(A)(a). The Department also notes that the existing working forestland in the region of Segment 1—which the Department determined to have substantial enough value to require Applicant to compensate for impacts thereto—is a shifting mosaic of forest types.

While no-harvest areas or fee-acquired parcels would support mature forest species, the Department finds that the Orders do not require Applicant to include such areas in the Conservation Plan. The Orders allow flexibility in terms of the legal interest to be acquired in the proposed conservation area(s). The Orders require that the proposed conservation area(s) must be managed to provide blocks of habitat for species preferring mature forest habitat. As detailed above, and as conditioned by this order, the Department finds that the proposed definition of "mature forest," the Mature Forest Goal, and the "shifting mosaic" management strategy will provide blocks of habitat for species preferring mature forest habitat and are appropriate in the context of the Orders.

The Department finds that, as conditioned by this order, the proposed Conservation Plan describes a conservation area that will be managed to provide blocks of habitat for species preferring mature forest habitat, thereby meeting the requirements of the Orders.

C. Providing wildlife travel corridors along riparian areas and between mature forest habitat.

Section VII.A.6 of the proposed Conservation Easement requires that "a 100-foot no-harvest buffer must be maintained around all perennial streams and associated open wetlands as depicted in the Baseline Documentation beginning at the normal high-water line (up to no more than approximately 2,400 acres), and management must be maintained for continuous Mature Forest habitat from 100 feet to 330 feet from the normal high water line (up to no more than approximately 4,500 additional acres)." The proposed Conservation Plan notes: "Although the state regulations vary according to drainage classes, for the average perennial stream found in the parcel, current state law only requires maintaining vegetative shade of surface waters with no sediment discharge."

Section VII.A.6 of the proposed Conservation Easement allows roads and skid trails to cross perennial streams to facilitate forestry activities, but crossings must be "minimized and constructed to protect streambank integrity."

Joint Commenters stated that "the 100-foot no-harvest buffer around all perennial streams will provide substantial habitat benefits, including protecting water quality, facilitating wildlife travel, and enabling the development of truly mature forests…" but they note several perceived shortcomings, including that "the [proposed Conservation] Plan does not limit new stream crossings nor require any new or replacement crossings to follow Stream Smart standards."

MNAP stated that the no-harvest stream buffer "is consistent with some habitat conservation programs. However, other standards put forward by wetland protection or habitat conservation programs are not fully met in the [proposed Conservation] Plan. MNAP recommends that the standards in the [proposed Conservation] Plan not be used as a precedent for working forest easements." MNAP also recommends "use of temporary roads and bridges wherever possible" for stream crossings used to support harvesting.

MDIFW stated that "riparian habitat management standards will greatly exceed those required by law."

TNC and CLF stated that "The riparian corridors are an important component of mature forest connectivity…."

SAM stated that "establishment of riparian corridors" along with extinguishment of development rights and management for mature forest, "would provide impressive protections for Maine's forests and the species that rely upon them."

The Department finds persuasive the comments of the Joint Commenters regarding the importance of requiring Stream Smart standards for new or replacement stream crossings. Allowing new or replacement stream crossings that do not meet such standards may harm the health and connectivity of streams in the proposed conservation area, thereby detracting from the value of the wildlife travel corridors along riparian areas. Therefore, the Department finds that Stream Smart standards for new or replacement stream crossings are necessary for Applicant to meet the requirements of the Orders.

The Department finds that the proposed conservation area will be managed to provide wildlife travel corridors along riparian areas and between mature forest habitat, provided Section VII.C.2 and Section VII.D.2 of the proposed Conservation Easement are revised to require any new or replacement stream crossings in the proposed conservation area to have a diameter of at least 1.2 times the bankfull width of the stream, to be either open-bottomed or to have between one-quarter and one-half of the diameter of the culvert embedded below the stream substrate, and to adhere to

other principles described in the 2017 Stream Smart Road Crossing Pocket Guide published by the Maine Department of Transportation.

D. Promoting habitat connectivity.

Section VII.A.1 of the proposed Conservation Easement prohibits "[r]esidential, industrial, and commercial activities and development, quarrying, mining, mineral development, alteration of watercourses and water bodies, and building development activities" in the proposed conservation area, "except as permitted for the authorized uses in this Conservation Easement, including but not limited to: Commercial Forest Management Activities (see Section VII.A.6), Permitted Excavation and Use of Gravel, Sand, and Rock, (see Section VII.D.3), Ecosystem Service Markets (see Section VII.A.4), Forest and Vegetation Management (see Section VII.E), Incidental Operations (see Section VII.E) and for the enhancement of Non-Intensive Outdoor Recreation as defined herein and other activities expressly permitted by this Conservation Easement or reserved by Grantor." The proposed Conservation Easement also states: "Any activities on or uses of the Protected Property that are inconsistent with the Conservation Purposes [described in Section IV] are prohibited."

Joint Commenters stated that "the [proposed] Conservation Easement falls short of the requirement to promote habitat connectivity" for multiple reasons. These reasons include a lack of restrictions on new logging roads and skid trails, particularly in riparian areas; allowance of commercial sale of gravel, sand, and rock; allowance for water extraction; and allowance for new rights-of-way and easements in the conservation area.

TNC and CLF also stated: "The proposed Conservation Easement would be strengthened by prohibition of the commercial sale of gravel, sand, and rock," and that the proposed Conservation Easement "should be revised to expressly prohibit new rights of way, easements, etc., rather than allowing them with the Holder's prior written approval."

Legislative Commenters stated similar concerns about new roads and rights of way and the commercial sale of gravel, sand and rock.

Comments from 260 members of the public also expressed concern about the potential for future development like new roads and gravel mining in the proposed conservation area.

Johnson stated: "Allowing gravel, sand and rock extraction (but not quarrying) for use on roads within the conservation area on the property is reasonable but commercial or industrial extraction or sale should be prohibited."

Section VII.D.3 of the proposed Conservation Easement allows the excavation and use of gravel, sand, and rock. This section limits activities to no more than ten acres

of exposed mineral surface per site at any time, no more than an aggregate area of 70 acres exposed at any one time, and no more than an aggregate area of 150 mined acres in perpetuity. Permitted uses of excavated materials include commercial sale of the materials.

The Department finds that the limited scale of excavation permitted under the proposed Conservation Easement will not conflict with the promotion of habitat connectivity across the 50,063-acre proposed conservation area. As Applicant notes in their August 1, 2025 comments, the proposed Conservation Easement limits excavation to 150 acres in total in perpetuity despite no requirement in the Orders to do so. The Department notes that the Moosehead Region Conservation Easement, placed on 359,000 acres adjacent to the proposed conservation area in 2012,[2] allows the off-site use of sand, gravel, and rock excavated from the protected property and does not place any limit on the total acreage of excavation in perpetuity. The Department finds that the proposed Conservation Easement's 150-acre cap on excavation in perpetuity is sufficient to ensure promotion of habitat connectivity regardless of whether excavated materials are sold commercially.

The Department concurs that no new rights-of-way or easements should be allowed in the proposed conservation area. The primary concern with new rights-of-way or easements is that they may lead to the construction of new structures such as roads or utility infrastructure, which would detract from habitat connectivity. Sections VII.C and VII.D of the proposed Conservation Easement prohibit new structures and surface alterations in the proposed conservation area, with limited exceptions, including land management roads necessary for commercial forestry operations. Section VII.A.1 also prohibits specific developments, including transmission lines. Therefore, even if the proposed Conservation Easement were to allow new easements and rights-of-way, such easements and rights-of-way could not be used for new roads (except logging roads), transmission lines, or other unauthorized structures or surface alterations.

In response to comments, Applicant removed language from the initial draft conservation easement that would have allowed new rights-of-way and easements in the conservation area with the prior written approval of BPL (Section VII.A.3.a of the initial draft conservation easement submitted May 9, 2025). The proposed Conservation Easement, submitted on October 7, 2025, appears to only allow new access and utility easements for Route 201, if such easement rights are necessary for the Maine Department of Transportation to comply with federal or state law or are necessary for public safety, as determined and approved by BPL.

However, the Department finds that additional changes to Section VII.A.3 of the proposed Conservation Easement are necessary to clarify that no new access or utility easements may be granted (except in relation to Route 201) and that any leases or licenses issued by the Grantor may not result in new rights-of-way, corridors, roads, or development. To ensure clarity, and as a condition necessary to meet the

[2] Somerset County Registry of Deeds, Book 04523, Page 222, filed May 14, 2012.

requirements of the Orders, Applicant must revise the proposed Conservation Easement in Section VII.A.3 as follows:

- Section VII.A.3(a) must be revised to read: "Access and Utility Easements. No new access or utility easements may be placed on the Protected Property, except that Holder may provide its prior written approval for easements related to State Route 201 if such easement rights minimize adverse impacts to the Conservation Values and Holder determines that such easement rights are: (1) necessary for the Maine Department of Transportation to comply with federal or state law or (2) necessary for public safety."
- Section VII.A.3(b) must be revised to read: "Leases and Licenses. No new leases, licenses, or other interests in the Protected Property that establish a right-of-way, corridor of ingress or egress, driveway, road, utility distribution or service line, or tower, or that otherwise conflict with the restrictions in this Conservation Easement, shall be granted. Prior written approval of the Holder must be provided for new leases or licenses, including sugar bush leases, except short-term and temporary leases or licenses across existing rights-of-way, so long as such leases or licenses do not include any land-clearing activities. For purposes of this Section VII.A.3(b), short-term and temporary means less than three years and non-renewable."

While the proposed Conservation Easement does not extinguish the landowner's groundwater rights, its provisions are clear that commercial groundwater extraction is prohibited. As noted above, Sections VII.C and VII.D of the proposed Conservation Easement prohibit new structures and surface alterations, with limited exceptions, and such exceptions do not include structures and surface alterations for groundwater extraction. Section VII.D reads, "No…alteration may be made to the surface or subsurface of the Protected Property or to its surface or ground waters…" except for a prescribed list of Grantor-reserved rights, which do not include groundwater extraction. Additionally, any commercial groundwater extraction would constitute a "commercial" activity, which is generally prohibited by Section VII.A.1, except for certain specific authorized uses, which do not include groundwater extraction. Therefore, the Department finds that commercial groundwater extraction is prohibited by the proposed Conservation Easement.

As noted in Finding 9 above, several commenters, including BPL, TNC and CLF, and SAM, indicated that the geographic location of the proposed conservation area—connecting approximately 400,000 acres of other conserved land—provides significant conservation value. The Department finds that, subject to the conditions of this order, the location of the proposed conservation area will promote habitat connectivity at a regional scale. The Department further finds that extinguishing development rights, promoting conservation of mature forest areas, providing blocks of habitat for species preferring mature forest habitat, and providing wildlife travel corridors along riparian areas and between mature forest habitat—as described in the Findings above and as conditioned by this order—will promote habitat connectivity within the proposed conservation area. Therefore, the Department finds that the proposed Plan, as conditioned by this order, will promote habitat connectivity,

provided Applicant revises the proposed Conservation Easement in Section VII.A.3 as follows:

- Section VII.A.3(a) must be revised to read: "Access and Utility Easements. No new access or utility easements may be placed on the Protected Property, except that Holder may provide its prior written approval for easements related to State Route 201 if such easement rights minimize adverse impacts to the Conservation Values and Holder determines that such easement rights are: (1) necessary for the Maine Department of Transportation to comply with federal or state law or (2) necessary for public safety."
- Section VII.A.3(b) must be revised to read: "Leases and Licenses. No new leases, licenses, or other interests in the Protected Property that establish a right-of-way, corridor of ingress or egress, driveway, road, utility distribution or service line, or tower, or that otherwise conflict with the restrictions in this Conservation Easement, shall be granted. Prior written approval of the Holder must be provided for new leases or licenses, including sugar bush leases, except short-term and temporary leases or licenses across existing rights-of-way, so long as such leases or licenses do not include any land-clearing activities. For purposes of this Section VII.A.3(b), short-term and temporary means less than three years and non-renewable."

E. Standard sustainable forestry operations commonly allowed in areas subject to working forest easements.

As noted above, the Orders state that, "[w]hile…commercial timber operations are not expressly precluded, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan."

MDIFW stated in comments that the "[proposed Conservation] Plan attempts to strike a balance between commercial forest management on the Mitigation Parcel while also maintaining suitable acreage of mature forest to mitigate for lost connectivity in the forests impacted by the NECEC [Project] corridor…. Over time, MDIFW believes the Mitigation Parcel will have significantly more mature forest than would have likely occurred under a typical industrial forest management regime, and riparian habitat management standards will greatly exceed those required by law. This will provide benefits to wildlife species that are reliant on mature forests."

TNC and CLF stated that the Mature Forest Goal in the proposed Conservation Easement, "does represent a meaningful change from the current commercial forest management on the property," while also stating that the definition of mature forest should require taller trees and denser basal area than originally proposed, as discussed in Finding 10(A)(a) above.

Seymour stated that the proposed Conservation Easement "is arguably much better than other similar easements that limit harvesting via minimum stocking levels and other less-effective methods."

Stephen Robe, Maine Licensed Professional Forester, stated in comments dated June 13, 2025, that the proposed Conservation Easement is "[not] business as usual and is a substantial change in typical forest management practices."

Joint Commenters argue that other conservation easements in Maine include more protective provisions than those contained in the proposed Conservation Easement. In supplemental comments dated October 24, 2025, Joint Commenters stated that "the State of Maine and multiple land trusts manage conservation easements with much stronger provisions for the conservation of mature forests than what is proposed by NECEC [Transmission LLC]." Joint Commenters point to several specific examples: Fourth Machias Lake Ecological Reserve, No. 5 Mountain Preserve, Leuthold Forest Reserve Addition (#6 Mountain), Grafton Forest Wilderness Preserve, Alder Stream, Debsconeag Lakes Wilderness Area, and Amazon-Musquash Reserve and Special Management Area.

The Department finds that while the conserved lands referenced by Joint Commenters are exemplary for their ecological management, they are not "working forest conservation easements" as commonly understood; they are ecological reserves. The Department finds that the Orders do not require the Conservation Plan to include ecological reserves; instead, the Orders only preclude "standard sustainable forestry operations."

In comments on the draft order dated November 12, 2025, Joint Commenters (excluding Maine Council of Trout Unlimited) referenced the Kennebago Conservation Easement as another example of a preferable working forest conservation easement. In this example, the encumbered property is held in fee by a conservation organization, Rangeley Lakes Heritage Trust. Forest management activities on the property are governed by a multi-resource management plan and a forest management plan that establishes a "sustainable harvest level" defined as a harvest level that will "ensure a continuing renewable and long-term source of forest products is available and maintain the stocking level over the period of the Forest Management Plan." The Kennebago Conservation Easement also includes "sustainable forest management principles," one of which is the "[m]aintenance of a diversity of forest age classes across the landscape and promotion of native species." The Kennebago Conservation Easement does not establish no-harvest buffers on riparian areas and does not contain explicit goals for mature forest conservation. The Department finds that the provisions governing forest management activities in the Kennebago Conservation Easement are not definitively stronger or weaker for conservation of mature forest and mature forest species than in Applicant's proposed Conservation Easement.

The Department finds that an important comparison in this context is the Moosehead Region Conservation Easement. This working forest conservation easement was placed on 359,000 acres adjacent to the proposed conservation area in 2012. The Moosehead Region Conservation Easement allows any forest management operations

that comply with applicable laws. By contrast, the proposed Conservation Easement would establish 330-foot mature forest riparian buffers and 100-foot no-harvest riparian buffers and would require 50% of the proposed conservation area to be managed to a definition of mature forest in perpetuity.

The Department finds that the proposed Conservation Easement, on balance, does not represent "standard sustainable forestry operations." The Department finds that the proposed Conservation Easement represents an improvement upon standard sustainable forestry operations commonly allowed in areas subject to working forest easements, that it is therefore consistent with the primary goal of the proposed Conservation Plan, and that it, as conditioned by this order, meets the requirements of the Orders.

11. **Forest Management Plan.**

The Orders require that the Conservation Plan must "[i]nclude 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." As noted in Finding 3 above, on July 16, 2025, Applicant submitted a draft Forest Management Plan, and on October 24, 2025, Applicant submitted a revised Forest Management Plan (proposed Forest Management Plan). On October 27, 2025, BPL commented that the agency has reviewed the proposed Forest Management Plan and "finds that the Forest Management Plan contains the required plan elements and is consistent with the terms of the [proposed Conservation Easement] submitted to the [Department] by NECEC [Transmission LLC] on October 7, 2025. [BPL] therefore approves the Forest Management Plan."

The Department finds that, subject to the conditions of this order, the proposed Conservation Plan includes an adequate 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.

12. **Stewardship funding.**

The Conservation Plan must "[e]xplain how the applicant will ensure the availability [of] stewardship funding (e.g., funding for monitoring and enforcement) needed to support achievement of the goals of the Conservation Plan." In its May 9, 2025 submission, Applicant stated: "NECEC [Transmission] LLC has allocated funds for stewardship of the conservation lands for monitoring and enforcement of conservation plan requirements and to support achievement of [the proposed Conservation Easement's] goals. Appropriate stewardship funding amounts will be calculated, and funds disbursed, to the BPL along with conveyance of the [Conservation Easement] for the Protected Property." In its response to comments dated August 1, 2025, Applicant further stated: "With a

stewardship fund of $659,000 that the BPL proposed as sufficient to meet its ongoing monitoring and enforcement needs, the Conservation Easement will provide in perpetuity habitat connectivity and conservation of mature forest areas well beyond the life of the Project."

In comments dated November 12, 2025, BPL stated: "Based on additional evaluation of the perpetual monitoring needs for the conservation easement, [BPL] determined that $659,000 is insufficient to cover [BPL's] costs. The revised amount is $1,195,628. NECEC [Transmission] LLC has informed [BPL] that it has accepted this revised amount."

The Department finds that the proposed Conservation Plan explains how Applicant will ensure the availability of stewardship funding needed to support achievement of the goals of the Conservation Plan.

13. **Third-party enforcement rights.**

The proposed Conservation Plan must "[e]nsure the Department will have third party enforcement rights." Section X.E of the proposed Conservation Easement states: "Pursuant to the Order, [the Department] shall have all of the enforcement rights granted to Holder pursuant to this Section X, and shall act as a third party enforcer of this Conservation Easement."

The Department finds that the proposed Conservation Plan adequately ensures the Department will have third-party enforcement rights.

14. **Other considerations.**

Several organizations and individuals that are not listed above expressed overall support for the proposed Conservation Plan, including the Maine Renewable Energy Association, EDP Renewables North America LLC, International Brotherhood of Electrical Workers (IBEW) Local 104, Industrial Energy Consumers Group, Maine State Chamber of Commerce, Richard B. Anderson, Matthew Scott, and Dr. Lloyd Irland.

15. **Severability.**

The invalidity or unenforceability of any provision, or part thereof, of this order shall not affect the remainder of the provision or any other provisions. This order shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

Based on the above, the Department concludes that NECEC TRANSMISSION LLC has complied with Special Condition #39 of Department Order #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 and Special Condition #10 of Board Order #L-27625-26-F-Z/L-27625-TG-G-Z/L-27625-2C-H-Z/L-27625-VP-I-Z/ L-27625-IW-J-Z/L-27625-26-AB-Z, subject to each of the following conditions:

1. NECEC Transmission LLC must revise the proposed Conservation Easement submitted on October 7, 2025, as follows:

    A. Section VII.C.2 and Section VII.D.2 must be revised to require any new or replacement stream crossings in the proposed conservation area to have a diameter of at least 1.2 times the bankfull width of the stream, to be either open-bottomed or to have between one-quarter and one-half of the diameter of the culvert embedded below the stream substrate, and to adhere to other principles described in the 2017 Stream Smart Road Crossing Pocket Guide published by the Maine Department of Transportation.

    B. Section VII.A.3(a) must be revised to read: "Access and Utility Easements. No new access or utility easements may be placed on the Protected Property, except that Holder may provide its prior written approval for easements related to State Route 201 if such easement rights minimize adverse impacts to the Conservation Values and Holder determines that such easement rights are: (1) necessary for the Maine Department of Transportation to comply with federal or state law or (2) necessary for public safety."

    C. Section VII.A.3(b) must be revised to read: "Leases and Licenses. No new leases, licenses, or other interests in the Protected Property that establish a right-of-way, corridor of ingress or egress, driveway, road, utility distribution or service line, or tower, or that otherwise conflict with the restrictions in this Conservation Easement, shall be granted. Prior written approval of the Holder must be provided for new leases or licenses, including sugar bush leases, except short-term and temporary leases or licenses across existing rights-of-way, so long as such leases or licenses do not include any land-clearing activities. For purposes of this Section VII.A.3(b), short-term and temporary means less than three years and non-renewable."

2. The signed and recorded Conservation Easement, as revised by Special Condition #1 of this order, must be submitted to the Department for review before commercial operation of the NECEC Project and no later than 45 days from the date of this order.

3. Any future proposed modification of the recorded Conservation Easement must be submitted to the Department for review and approval.

4. If the Conservation Easement is ever amended in a manner that materially detracts from its conservation values or reduces the number of acres encumbered by the easement, or if the easement is ever terminated, NECEC Transmission LLC, in addition to complying with the requirements of 33 M.R.S §477-A(2)(B) and any other applicable statutory provisions, must submit a new Conservation Plan to the Department within 30 days for the Department's 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 18TH DAY OF NOVEMBER, 2025.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
Melanie Loyzim, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

DH/L-027625-0003

DEP INFORMATION SHEET

Appeals to the Board of Environmental Protection

Date: November 2024 Contact: Clerk.BEP@maine.gov or (207) 314-1458

SUMMARY

This document provides information regarding a person's rights and obligations in filing an administrative or judicial appeal of: (1) a final license decision made by the Commissioner of the Department of Environmental Protection ("DEP"); or (2) an insurance claim-related decision ("Clean-up and Response Fund decision") made by the Commissioner or the Office of State Fire Marshal pursuant to 38 M.R.S. § 568-A.

Except as explained below, there are two methods available to an aggrieved person seeking to appeal a license decision made by the Commissioner or a Clean-up and Response Fund decision: (1) an administrative appeal before the Board of Environmental Protection ("Board"); or (2) a judicial appeal before Maine's Superior Court. An aggrieved person seeking review of a license decision or Clean-up and Response Fund decision made by the Board may seek judicial review in Maine's Superior Court.

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

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

A person filing an appeal with the Board should review the applicable rules and statutes, including the DEP's Chapter 2 rule, *Processing of Applications and Other Administrative Matters* (06-096 C.M.R. ch. 2); Organization and Powers, 38 M.R.S. §§ 341-D(4) and 346; and the Maine Administrative Procedure Act, 5 M.R.S. § 11001.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

Within 30 calendar days of the date of: (1) a final license decision of the Commissioner; or (2) a Clean-up and Response Fund decision, an aggrieved person may appeal to the Board for review of that decision. "Aggrieved person" means any person whom the Board determines may suffer a particularized injury as a result of a Commissioner's license decision or a Clean-up and Response Fund decision. A complete appeal must be received by the Board no later than 5:00 p.m. on the 30th calendar day of the decision being appealed. With limited exception, untimely appeals will be dismissed.

HOW TO SUBMIT AN APPEAL TO THE BOARD

An appeal to the Board may be submitted via postal mail or electronic mail (e-mail) and must contain all signatures and required appeal contents. An electronic filing must contain the scanned original signature of the appellant(s). The appeal documents must be sent to the following address.

Chair, Board of Environmental Protection
c/o Board Clerk
17 State House Station
Augusta, ME 04333-0017
Clerk.BEP@maine.gov

The DEP may also request the submittal of the original signed paper appeal documents when the appeal is filed electronically. The risk of material not being received in a timely manner is on the sender, regardless of the method used.

At the time an appeal is filed with the Board, the appellant must send a copy of the appeal to: (1) the Commissioner of the DEP (Maine Department of Environmental Protection, 17 State House Station, Augusta, Maine 04333-0017); (2) the licensee, if the appellant is not the licensee; and (3) if a hearing was held on the application, any intervenors in that hearing proceeding. For appeals of Clean-up and Response Fund decisions made by the State Fire Marshal, the appellant must also send a copy of the appeal to the State Fire Marshal. **Please contact the Board Clerk at clerk.bep@maine.gov or DEP staff at 207-287-7688 with questions or for contact information regarding a specific license or Clean-up and Response Fund decision.**

REQUIRED APPEAL CONTENTS

A written appeal must contain the information specified in Chapter 2, section 23(B) or section 24(B), as applicable, at the time the appeal is submitted. **Please carefully review these sections of Chapter 2**, which is available online at https://www.maine.gov/sos/cec/rules/06/chaps06.htm, or contact the Board Clerk to obtain a copy of the rule. Failure to comply with the content of appeal requirements may result in the appeal being dismissed pursuant to Chapter 2, section 23(C) or section 24(C).

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with the administrative record.* Generally, the record on which the Board decides an appeal is limited to the record prepared by the agency in its review of the application, any supplemental evidence admitted to the record by the Board Chair and, if a hearing is held on the appeal, additional evidence admitted during the hearing. A person who seeks to appeal a decision to the Board is encouraged to contact the DEP (or State Fire Marshal for Clean-up and Response Fund decisions made by that agency) to inspect the record before filing an appeal.

2. *Be familiar with the applicable rules and laws.* An appellant is required to identify the licensing criterion or standard the appellant believes was not satisfied in issuing the decision, the bases of the objections or challenges, and the remedy sought. Prior to filing an appeal, review the decision being appealed to identify the rules and laws that are applicable to the decision. An appellant may contact the DEP or Board staff with any questions regarding the applicable rules and laws or the appeal procedure generally.

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. Unless a separate stay of the decision is requested and granted (*see* Chapter 2, section 23(M)), the licensee may proceed with an approved project pending the outcome of the appeal. Any activity initiated in accordance with the approved license during the pendency of the appeal comes with the risk of not knowing the outcome of the appeal, including the possibility that the decision may be reversed or modified by the Board.

4. *Alternative dispute resolution.* If the appeal participants agree to use mediation or another form of alternative dispute resolution ("ADR") to resolve the appeal and so notify the Board, the Board will not hear the matter until the conclusion of that effort, provided the participants engaged in the alternative dispute resolution demonstrate satisfactory progress toward resolving the issues. *See* Chapter 2, section 23(H) or contact the Board Executive Analyst (contact information below) for more information on the ADR provision.

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

The Board will acknowledge receipt of each appeal and develop a service list of appeal participants and any interested persons for use in the appeal proceeding. Electronic mail (e-mail) is the preferred method of communication during an appeal proceeding; however, the Board reserves the right to require paper copies of all filings. Once the Board Chair rules on the admissibility of all proposed supplemental evidence, the licensee (if the licensee is not the appellant) may respond to the merits of the appeal. Instructions specific to each appeal will be provided in correspondence from the Board Executive Analyst or Board Chair.

Generally, once all filings in an appeal proceeding are complete, the DEP staff will assemble a packet of materials for the Board (Board packet), including a staff recommendation in the form of a proposed Board Order. Once available, appeal participants will receive a copy of the Board packet and an agenda with the meeting location and start time. Once finalized, the meeting agenda will be posted on the Board's webpage https://www.maine.gov/dep/bep/index.html. Appeals will be considered based on the administrative record on appeal and oral argument at a regular meeting of the Board. *See* Chapter 2, Section 23(I). The Board may affirm all or part of the decision under appeal; affirm all or part of the decision under appeal with modifications, or new or additional conditions; order a hearing to be held as expeditiously as possible; reverse the decision under appeal; or remand the decision to the Commissioner or State Fire Marshal, as applicable, for further proceedings.

II. JUDICIAL APPEALS

The filing of an appeal with the Board is not a prerequisite for the filing of a judicial appeal. Maine law generally allows aggrieved persons to appeal final license decisions to Maine's Superior Court (*see* 38 M.R.S. § 346(1); Chapter 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A judicial appeal by a party to the underlying proceeding 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 aggrieved person, an appeal must be filed within 40 days of the date the decision was rendered. 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. § 346(4), the Maine Administrative Procedure Act, statutes governing a particular license decision, and the Maine Rules of Civil Procedure for substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal procedure, for administrative appeals contact the Board Clerk at clerk.bep@maine.gov or 207-287-2811 or the Board Executive Analyst at bill.hinkel@maine.gov or 207-314-1458, or for judicial appeals contact the court clerk's office in which the appeal will be filed.

Note: This information sheet, in conjunction with a review of the statutory and rule provisions referred to herein, is provided to help a person to understand their rights and obligations in filing an administrative or judicial appeal, and to comply with notice requirements of the Maine Administrative Procedure Act, 5 M.R.S. § 9061. This information sheet is not intended to supplant the parties' obligations to review and comply with all statutes and rules applicable to an appeal and insofar as there is any inconsistency between the information in this document and the applicable statutes and rules, the relevant statutes and rules apply.

EXHIBIT B

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.

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:

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.

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 areas[2] 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 species[4] 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]

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[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-feet wide. The remainder of the ROW within Segment 1 is 300-feet wide.

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.

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.

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

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.

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)

21. The Conservation Law Foundation (CLF)
22. Mike Pilsbury

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

These groupings are described below:

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

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

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

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

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

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

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

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

Group 9: Office of the Public Advocate (OPA). The OPA was neither for nor against the project, was granted intervenor status in the Department[7] 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.

"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

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

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

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

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

On April 3, 2019, during the April hearing week, Intervenor Groups 2 and 10 filed a motion requesting additional public hearing time be scheduled for cross-examination of the applicant's engineers on questions that were deferred the first few days of the hearing. Many of the questions that were deferred were deferred to the applicant's and Group 3's sur-rebuttal witnesses who were not present during the April hearing. This motion was denied in the Ninth Procedural Order issued April 10, 2019. The order stated that time would instead be allotted for this purpose on the May 9, 2019 hearing date.

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

The hearing continued on May 9, 2019, and the majority of testimony pertained to habitat fragmentation and the alternatives analysis, including the underground alternative.

At the close of the May 9, 2019, hearing, the Presiding Officer allowed the record to remain open for specific limited evidence to be entered into the record by May 17, 2019, and responses from parties to that evidence until May 24, 2019. The record also remained open for written comments from the general public until May 20, 2019, and then the parties' responses to those written comments from the general public until May 27, 2019.

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

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

2. FINANCIAL CAPACITY

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

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

A. On December 12, 2017, the applicant submitted a total revised project cost estimate of $949,745,330. Line items were included for various aspects of the design and construction of the project and included $73,405,592 for erosion control and access roads.
B. On July 31, 2018, the applicant submitted revised financial capacity documents, but did not change the total project cost estimate.
C. On August 13, 2018, a revised project construction schedule was submitted, but the total project cost estimate remained unchanged.

[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.

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.

3. TECHNICAL ABILITY

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

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

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

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

4. NOISE

The Department's noise standards are set forth in Chapter 375, § 10. Section 10(B)(1) states that "when a development is located in a municipality which has duly enacted by ordinance an applicable quantifiable noise standard, which … (1) contains limits that are not higher than the sound level limits contained in this regulation by more than 5 decibels (dBA), and (2) limits or addresses the various types of noises contained in this regulation or all types of noise generated by the development, that local standard, rather than this regulation, shall be applied by the Department within that municipality for each of the types of sounds the ordinance regulates."

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

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

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

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

Several municipalities that the project passes through have their own noise regulations. The local regulations would be applied by the Department in place of the Department noise standards, provided that the local regulation meet the requirements of Chapter 375, § 10(B)(1), as described above. The municipalities with local regulations are: Lewiston, Greene, Leeds, New Sharon, and Pownal.[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).

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.

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

averages were 47 dBA and 39 dBA, respectively. The most restrictive Department standard, which applies to residential areas, would be a daytime limit of 60 dBA and a nighttime limit of 50 dBA. The City of Lewiston Code of Ordinances limits noise to 50 dBA during the day and night at the nearest residential property lines. Burns & McDonnell modeled the noise for this substation using CadnaA. The applicant's results showed that sound levels from the converter station would not exceed the applicable noise level standard, Lewiston's 50 dBA standard, at any of the adjacent residential property lines. The highest modeled result at any property line was 48.3 dBA.

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

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

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

b. Larrabee Road Substation

The applicant proposes to add a 345-kV line termination structure, a 345-kV circuit breaker, disconnect switches, instrument transformers, surge arrestors, buswork modifications, support structures, foundations, and modifications to the existing protection and control systems at the Larrabee Road Substation in Lewiston. According to the Burns & McDonnell noise study, the highest predicted sound level at a residential property line pertinent to this substation is 43.1 dBA. Lewiston's ordinance sound level limit for this portion of the project is 50 dBA at the nearest residential property line.

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

c. Fickett Road Substation and Surowiec Substation

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

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

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

Burns & McDonnell responded on July 3, 2018 to this request. Burns & McDonnell summarized in this response that the highest predicted sound level, without a tonal penalty, would be 41.9 dBA. TE determined that the sound assessment was technically correct and complete and recommended that any new equipment installed at the Fickett Road Substation meets the sound power limits listed in Table 5-15 of the application.

d. Coopers Mills Substation

The applicant proposes to expand the existing Coopers Mills Substation located in Windsor. The expansion would require the addition of a 345-kV line termination structure, 345-kV circuit breakers, disconnect switches, instrument transformers, surge arrestors, buswork modifications, support structures, foundations, and modifications to the existing protection and control system. In addition, the substation work would require reconfiguration of the existing 345-kV lines.

The project also requires the addition of a +/-200 MVAR STATCOM to provided dynamic reactive support. The addition of the STATCOM would include multiple noise sources, which would increase sound levels at the property line and beyond.

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

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

e. Raven Farm Substation

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

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

expected sound level, including a 5-dBA penalty, would be 44.6 dBA. This lower model estimate was the result of the applicant updating the transformer and associated sound pressure level. The transformer planned for in the sound study would emit less sound (75 dBA at 6 feet).

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

B. Department Analysis and Findings

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

5. SCENIC CHARACTER

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

A. Overview – Visual Impact Assessment

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

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

- 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.

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 locations[11]:

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

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

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

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 conductors[13] 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.

The project corridor and numerous structures would be visible from the summit, which is accessible via a multi-use trail maintained by the Bureau of Parks and Lands. A small building, communications infrastructure, and a solar array are located at the top of the mountain. From the summit, the corridor will be visible in the midground looking toward the west side of the mountain at distances of 1.2 to 3.0 miles, and in the background (4+ miles) to the southeast. During the application review process, to address concerns and minimize the visual impact of the project, the applicant proposed tapering the vegetation in the corridor within the viewshed of Coburn Mountain and using non-specular conductors[14] in this same area. (Moderate)

H. Route 201 – Also known as the Old Canada Road Scenic Byway, Route 201 is designated as both a State and a National scenic byway. The 78.2-mile long byway will be impacted by both Segments 1 and 2. The VIA states that the project poles and conductors will be visible to motorists traveling on the byway. The applicant proposed to plant a vegetative, visual buffer along both sides of Route 201 at both crossing locations. (Moderate)

I. Attean View Rest Area – From the rest area located on Route 201 the project will be visible at a distance of 7+ miles. (Minimal)

J. Upper Kennebec River – The applicant modified the application, which originally included an overhead crossing, to incorporate an underground crossing using HDD technology. In the initial VIA with an overhead crossing the applicant rated the visual impact as Strong. Utilizing HDD to run the transmission line under the river results in no project visibility from the Kennebec River. (No visibility, as revised)

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)

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[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.

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

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

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

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.

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.

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

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

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).

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.

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

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.

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, 21additional photosimulations were added[21], 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.

(3) Evaluation of Scenic Impacts

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

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

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

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

a. Upper Kennebec River Crossing

The section of the Upper Kennebec River where the applicant originally proposed an overhead crossing is nationally known for its whitewater rafting with approximately 40,000 people a year booking trips with local rafting companies to float this section of the river. Initially, the applicant proposed an overhead crossing utilizing a five-structure design. The conductors, shield wires and the tops of at least two structures would have been visible from the Kennebec River. The applicant redesigned the crossing to eliminate two of the structures in an attempt to reduce the visibility of the project from the river. After the early portions of its review, and review of public input submitted to that point, on May 7, 2018, the Department sent the applicant a letter expressing its concerns with an overhead crossing of the Kennebec River and the scenic impact it would have on existing recreational use of the area. It is unlikely the Department could have found an overhead crossing in this area satisfied the scenic impact standards in NRPA and Site Law.

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

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

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

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 snow-mobilers' 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 snow-mobilers. The applicant's proposal to taper vegetation in the area visible from the summit, as well as to use non-specular conductors, significantly reduces the visual impact

of the project. Tapering softens the edge of the corridor and makes the corridor less visible overall. The addition of tapered vegetation reduces the spatial dominance of the project and improves its compatibility within the landscape. This is shown in the photosimulations with snow cover. A fully cleared, 150-foot wide corridor is the dominant feature in the landscape. The tapered corridor, in contrast, is no longer dominant, and is just one of the features of the landscape seen from the summit of Coburn Mountain, and no more prominent, for example, than an existing land management road.

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

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

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

d. Number 5 Mountain, T5 R7 BKP WKR

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

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

e. Beattie Pond

Beattie Pond is a remote pond developed with a single camp that is accessed by a private road. The applicant's original proposal included standard poles heights (approximately 100 feet tall) in the area near Beattie Pond. At the request of the Commission, one of these structures was redesigned to be shorter. As redesigned, the visibility of the project

from the pond would be limited to just the very top of that structure. On September 18, 2019, the applicant submitted a petition to reopen the record to allow it to modify the application to change the proposed route and use the Merrill Strip Alternative. As described in Section 1, this alternative moved the project out of the P-RR Subdistrict around Beattie Pond. 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).

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.

h. Moxie Stream

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

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

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

i. Appalachian Trail

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

- AT, Pleasant Pond Mountain summit area, The Forks Plantation. The new transmission line will be visible from the mountain at a distance ranging from 2.7 to 6.5 miles. The project will create a minimally incompatible line in the background. The conductors may be more visible in the afternoon when sunlight reflects off the lines. This impact may be reduced through the use of non-specular conductors. The Department finds the visual impact will be minimal from the Pleasant Pond Mountain summit area due to viewing distance and the resulting minimal project visibility, provided the applicant uses non-specular conductors within the viewshed of the summit area, including Middle Mountain.
- AT, Troutdale Road area, Bald Mountain Township. The widened corridor and new structures will be clearly visible from the AT, which runs on Troutdale Road for 0.2 miles. Additionally, the corridor will be visible at a perpendicular angle to the trail where it crosses the southwest corner of Moxie Pond. The Department finds that, although the new structures and widened corridor will increase the scale of intrusion to the landscape, it is subordinate when considered with the existing road and transmission line (which affect the expectations of the users in

this area), provided the applicant plants and maintains the proposed buffer vegetation along Troutdale Road.

- AT, Bald Mountain summit area, Bald Mountain Township. At the point closest to the AT at this location, the co-located transmission line will be visible at a distance of 2.8 miles. The widened corridor will be visible at a distance of 5.1 miles. When viewed from the summit area, the widened corridor will create a moderately incompatible line within the context of the existing viewshed along the west side of Moxie Pond. Additionally, due to the height of the structures, the lines will be a moderately incompatible line in the midground. The conductors will be the most visible project component, especially in the morning when the sun reflects off of the lines. This impact can be minimized with non-specular conductors. On June 29, 2018, the applicant submitted revised plans proposing a lowered height for the structures along Moxie Pond, which will minimize the scenic impact from both Bald Mountain and Moxie Pond.

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

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

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

j. Other Scenic Resources and Vantage Points Along the Corridor

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

Segment 1

- Wing Pond, Lowelltown Township. Two structures and lines are visible approximately 1.75 miles from the pond. No clearing will be visible from the pond. The structures do not introduce any incompatible lines or shapes to the sky backdrop and are subordinate when seen against the backdrop of Smart Mountain.
- Fish Pond, Hobbstown Township. No corridor clearing will be visible from the pond. The structures do not introduce any incompatible lines or shapes to the sky backdrop and are largely obscured by existing vegetation.
- Northern Forest Canoe Trail, Hobbstown Township, T5 R7 BKP. Four structures may be visible to paddlers from Fish Pond and the line will be visible during a portage on Spencer Rips Road and Spencer Road.

As discussed above, the scenic impact on Fish Pond will be minimal. The structures do not introduce any incompatible lines or shapes to the sky backdrop and are largely obscured by existing vegetation. While portaging on both roads, there may be intermittent views of the project. The scenic impacts will be minimal to moderate.

- Parlin Pond, Parlin Pond Township. The project will have a moderate impact as an incompatible line crossing the shoulder of Coburn Mountain and continuing to the northwest. Additionally, one structure will appear as a silhouette line against the sky. Overall from this pond, the project will be compatible with the landscape given the viewing distance of 1.8 to 2.8 miles and only a single silhouetted pole will be visible.
- Iron Pond, T5 R6 BKP WKR, Hobbstown Township. The top of one structure will be visible, approximately 2,700 feet from the pond. This impact will be minimal.
- Toby Pond, Hobbstown Township. The pond is not a rated waterbody. With taller structures within Wildlife Area 5, two poles would be visible from the pond, with one of these silhouetted against the sky. This impact will be minimal.
- Whipple Pond/Whipple Brook, T5 R7 BKP WKR. As demonstrated in the applicant's supplemental testimony, no structures would be visible from Whipple Pond, including any taller structures within Wildlife Area 5. Where the corridor crosses Whipple Brook, the taller vegetation required in Wildlife Area 5 would screen the poles on either side of the brook and eliminate a view down the corridor. In front of the campsite located on Whipple Brook south of the corridor, a single taller pole might be visible. Overall, the visual impact of the project on Whipple Pond and Whipple Brook, including any taller poles within Wildlife Area 5, will be minimal.
- Egg Pond, Bradstreet Township. The top of one structure, located 332 feet from the pond, will be visible. Given the inaccessible nature of the pond, and the insignificance of the single structure in the overall viewshed, the scenic impacts from the project for this site are minimal.
- Little Wilson Hill Pond, Johnson Mountain Township. The top of two structures will be visible, approximately 1,300 feet from the pond. This impact will be minimal.
- South Branch Moose River, Skinner Township. In response to questions by Department staff at the public hearing, the applicant testified that due to the topography in this location, without changing pole heights, only vegetation taller than 35 feet will need to be cut along the river. Such a change from the proposed plan will reduce project visibility, resulting in a significantly mitigated, moderate visual impact. Even if taller poles were used as part of Wildlife Area 2, the taller vegetation would continue to help screen the taller poles by preventing a view down a cleared corridor.
- Cold Stream, Johnson Mountain Township. As a requirement of this Order, the applicant will be required to maintain 35-foot tall vegetation within 100 feet of this stream. This may require the installation of taller poles on both sides of Cold Stream. (See Wildlife Area 7 in Appendix C, Table C-1.) Poles and wires will be

visible from the stream regardless of final pole height. The taller vegetation will minimize visual impacts by buffering the view of the corridor from the stream.

Segment 2

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

The new structures will be a moderate color difference from the surrounding landscape and the existing wooden structures. The new structures will introduce minimally incompatible lines to the landscape.

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

Segment 4

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

Segment 5

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

For each of these scenic resources and vantage points, the Department evaluated any photosimulations included in the VIA and the VIA as a whole, and considered the testimony and comments of its consultant, the applicant's testimony and supplementary

submissions, the testimony of the intervenors, and the testimony and written comments from members of the public. In addition, Department staff conducted site visits to many of the locations at issue and examined topographic maps of the areas. Based on this information and the record as a whole, the Department finds the five transmission line segments, including the poles, wires, and corridor, will not have an unreasonable adverse effect on scenic uses or character at any of the locations listed in this subsection.

k. Substations

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

- Merrill Road Converter Station. The proposed converter station will be approximately 85 feet or less in height. Existing vegetation with heights between 50 and 70 feet will remain as a visual buffer surrounding the station. Several residences are located within 600 feet of the proposed converter station but will have minimal views of the converter station due to the surrounding vegetation.
- Fickett Road Substation – Portions of the substation, including the access road and infrastructure, will be visible from Fickett Road, Allen Road, and three residences off Fickett Road. The applicant submitted a planting plan, dated August 9, 2018, with proposed plantings on both sides of the substation entrance on Fickett Road. The plantings range in heights at maturity from 4 to 70 feet and are intended to provide buffering to motorists and residents on Fickett Road. The substation will introduce a moderately incompatible form and moderately incompatible edges to the landscape; however, the proposed plantings will significantly mitigate these impacts.
- Coopers Mills Substation. Proposed additions to the north side of the Coopers Mills Substation include a new 345-kV transmission line terminal. No tree clearing is proposed. While three abutting residences and motorists on Coopers Mill Road will have some views of the project, the form, line, and texture will be compatible with the existing substation.
- Crowley's Substation. Replacement of a 115-kV switch and bus wire are proposed within the existing substation structure. No tree clearing is proposed.
- Larrabee Road Substation. Proposed upgrades to the existing substation include an additional 345-kV transmission line terminal and the replacement of an autotransformer. The upgrades will be visible from Mount David, a scenic hike on the Bates College campus, however, no significant changes in line, form, texture, or color will result from the project. An existing vegetative buffer will provide visual screening to a residence that abuts the substation.
- Maine Yankee Substation. An additional 345-kV transmission line terminal will be installed within the fenced yard of the existing substation, but it will be compatible with the existing character at this location.
- Surowiec Substation. A terminal for a new 345-kV transmission line from the proposed Fickett Road Substation, a new dead-end A-frame structure, and a new 345-kV circuit breaker will be installed at the existing substation.

No tree clearing is proposed and the additional structures will be similar in color, texture, and line to the existing substation.

- Raven Farm Substation. Proposed additions to the existing substation include a new 345/115-kV autotransformer and three new 115-kV transmission line terminations with associated equipment and foundations. An existing berm installed for the MPRP will provide visual screening for the project.

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

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

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

l. Cumulative Impacts

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

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

With regard to Old Canada Road, the four locations from which the project will be visible are separated by the following distances: 6.2, 6.7, and 17.1 miles. While the travel time between viewpoints for a motorist on the road is short, so too is the amount of time for which the project would be visible at each point for someone traveling at the speed limit. (View times are discussed above.) In the context of the 78-mile stretch of road designated as a scenic byway, the cumulative time the project would be visible is

minimal. The Department finds that when the viewing time, distance between viewpoints, and scenic impact at each viewpoint are considered, the project will not result in an unreasonable cumulative interference with the existing scenic or aesthetic use of Old Canada Road.

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

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

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

m. Forest Management Activities in the Vicinity of the Project

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

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

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

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

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

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

The majority of testimony, public comment, and record evidence focuses on the potential impact of Segment 1.

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

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

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

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

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

In Segments 2 through 5, the transmission line is proposed to be co-located either within or immediately adjacent to an existing corridor.

The Department finds this co-location of the proposed line will greatly limit the impact on existing uses and not result in an unreasonable impact.

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

7. NATURAL RESOURCE IMPACTS

Site Law, 38 M.R.S. § 484(3), requires an applicant to demonstrate that a project will not adversely affect any natural resources. Chapter 375, § 15, which is part of the Department's rules implementing Site Law, recognizes the need to protect wildlife and fisheries by maintaining suitable and sufficient habitat, including travel lanes between areas of available habitat, and the susceptibility of certain species to disruption and interference of lifecycles by proposed alterations and activities. Chapter 375, § 12 recognizes the importance of preserving unusual natural areas for educational and scientific purposes. 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 SVP[24]; 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.

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.

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

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.

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.

In a December 11, 2017, letter to the applicant following initial review of the proposal, Department staff stated: "The project crosses 67[27] 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.)

- 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

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 off funding for different impacts.)

C. Public Hearing and Comments

(1) Alternatives Analysis

a. Applicant Testimony and Evidence on Alternatives

In its application, supporting documents, and witnesses' pre-filed testimony for the first segment of the public hearing, CMP provided evidence on its methods to avoid and minimize the impacts from the project, as described above.

This evidence included evaluation of the alternative routes described above, as well as the efforts the applicant took to site the line once a general location was chosen. On April 1, 2019, CMP's witnesses provided oral testimony on its alternatives analysis. The applicant's witnesses on this first day did not address the feasibility of locating the transmission line, or sections of the line, such as Segment 1, underground.

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

On May 9, CMP's witnesses Justin Tribbet, Justin Bardwell, Thorn 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 coast, or roughly an increase of 67 percent. Tribbet also addressed other transmission line projects with undergrounding technology, noting that each involves project-specific considerations. He listed projects such as Connect New York, Northern Pass, TDI Vermont, and Vermont Greenline and testified that none of these projects had demonstrated economic feasibility or secured a long-term transmission service agreement.

CMP witness Kenneth Freye testified that at the time CMP was evaluating route alternative it discussed options with the landowner of Spencer Road, Plum Creek Maine Timberlands, LLC. Plum Creek was opposed to having a transmission line along the road. Freye also testified that locating the line along Route 201 was not practicable for several reasons, principally because the Department of Transportation would not allow

the underground transmission line within the travel way of the road.[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.

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

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 poolscapes, 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.

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

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

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

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

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

The applicant has made two notable modifications to its proposal after its original alternatives analysis, locating the proposed transmission line under the Upper Kennebec River through the use of HDD technology and adjusting the corridor to stay out of the LUPC's Recreation Protection Subdistrict around Beattie Pond through selection of the Merrill Strip Alternative. The underground crossing of the Upper Kennebec River reduced impacts to existing scenic and recreational uses of that resource and the Merrill Strip Alternative reduced impacts for users of Beattie Pond. Both have been appropriately incorporated into the project by the applicant and reflect the value of the permit review process and the potential for projects to evolve during this process. It is unlikely an overhead crossing of the Kennebec River would have satisfied the applicable visual impact standards and the modification of the route in the vicinity of Beattie Pond, through the Merrill Strip Alternative, responded to concerns raised in the course of the LUPC's review.

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

The applicant submitted testimony and exhibits on the underground alternative in response to evidence submitted and arguments made by intervenors. The Presiding Officers allowed the intervenors to submit written sur-rebuttal and scheduled an

additional hearing day for testimony and cross-examination of witnesses on this topic, as well as some other testimony. The Department finds that the evidence in the record on the underground alternative is sufficient for the Department's review of whether the applicant has met its burden of proof on the licensing criteria, including the requirement that the applicant provide an analysis of alternatives.

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

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

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

A concrete pad would be poured in the bottom and the spliced cables, each with its 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,

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.

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

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).

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

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

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.

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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.

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 it if 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

mitigation of those impacts, the Department commonly applies an 8:1 ratio[33] 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 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.

[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).

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, § 9[35]; 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 poolscape qualifies as a significant vernal pool, this pool is regulated as such under Chapter 335. Vernal pools that do not meet the definition of significant are regulated under NRPA as wetlands pursuant to Chapter 310.

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 resources[36] 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.

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

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.

Many of the culverts that may be replaced by the funding proposed by CMP would not be located under town roads and, therefore, would be less expensive to construct. However, based on Department experience and intervenors' witness testimony, sufficiently improved crossings will cost substantially more than $10,000 each. The Department finds the Reardon testimony on culvert replacement costs to be credible. He stated that the cost to construct a proper culvert crossing is in the range of $50,000 to $100,000, depending on the type of crossing. Assuming an average cost of $75,000, the Department finds that replacing approximately 25 culverts would require $1,875,000 in funding.

Prior to the start of construction, CMP must establish an escrow account, secure an irrevocable letter or credit, or otherwise provide a financial guarantee acceptable to the Department, to fund $1,875,000 of culvert replacements. Prior to commercial operation of the project, the applicant must submit a plan to the Department for review and approval that establishes the locations of the culvert replacements and how the funds will be disbursed. The culverts to be replaced must be in the vicinity of Segments 1 or 2, must completely or partially block fish passage, must be replaced with crossings consistent with Stream Smart[39] 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.

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

- 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.

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.

(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

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:

- 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 archaeological survey report.

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

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

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

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

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

With regard to the two farmsteads, the barn, and airfield the Department finds the impact of the project on these historic properties would be indirect. The structures and the airfield themselves would not be impacted, but the setting in which they are located would be affected. The Department finds, however, that this impact would not affect the preservation of these historic properties, nor would the impact be unreasonable. Factors the Department considered include that the project at each of these sites is being 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.

With regard to the airfield, it was established in the 1960s, with hangers ranging in age from the 1960s to the 1990s. An initial transmission line was constructed in 1930, well before the establishment of the airfield, with a second line added in approximately 2012.

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

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 publics wells, identified by the applicant.

B. Department Analysis, Findings, and Conclusions

The Department has evaluated the applicant's proposal and the evidence related to buffers. With regard to the protection of waterbodies from sedimentation and surface runoff, the Department finds the project will be set back from great ponds, except for a short section of Segment 2 where the co-located corridor crosses Moxie Pond. The setbacks from great ponds (except Moxie Pond) serve as an adequate buffer. The Department further finds that the increased riparian filter areas (buffers) – 100 feet on all streams in Segment 1, 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.

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.

11. STORMWATER MANAGEMENT

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

A. Basic Standards

(1) Erosion and Sedimentation Control

The applicant submitted an Erosion and Sedimentation Control Plan (Section 14 of its Site Law application) that is based on the performance standards contained in Appendix A of Chapter 500 and the Best Management Practices outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by, and revised in response to the comments from, Department staff. Staff recommend the applicant perform a complete GIS analysis, including both soils and topographic data, on Segment 1 to determine the areas with high erosion risk. The Department commented that the high-risk areas must:

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

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

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

Due to the length of the transmission line portion of the project, the number of segments involved, and the amount of material that must be removed for construction of the Merrill Road Converter Station, the applicant must retain the services of no fewer than one third-party inspector for each transmission line segment under construction at any one time,

and one third-party inspector for the converter station. If CMP's contractors employ multiple crews working in multiple locations within a segment, the Department may require more third-party inspectors. Details of the erosion control requirements will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor. Prior to the start of construction, the applicant must conduct a pre-construction meeting to discuss the construction schedule and the erosion and sediment control plan with the appropriate parties. This meeting must be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspectors. The applicant must retain the services of the third-party inspectors in accordance with the Special Condition for Third Party Inspection Program, which is attached to this Order.

(2) Inspection and Maintenance

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

(3) Housekeeping

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

(4) Summary

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

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

B. General and Phosphorus Standards

The applicant's stormwater management plan includes general treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to

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

(1) Merrill Road Converter Station

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

(2) Fickett Road and Surowiec Substations

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

(3) Other Substations

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

(4) Summary

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

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

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

C. Flooding Standard

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

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

12. GROUNDWATER

Site Law, in 38 M.R.S.A. § 484(5), requires an applicant to demonstrate that the proposed development will not pose an unreasonable risk that a discharge to a significant ground-water 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,

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

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

The proposed project will generate approximately 30,000 cubic yards of stumps and grubbings. Wood materials associated with clearing will be sold as marketable timber, chipped for biomass facilities, manufactured into erosion control mulch, and/or chipped and spread within the corridor. These materials are not proposed to be shipped to a landfill. Any excess soils removed as part of this project will be utilized on site or will be removed to other exempt or permitted facilities. Any wood that is chipped and spread on the corridor must be left in layers no more than two inches thick, as measured above the mineral soil surface.

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

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

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

16. FLOODING

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

The transmission line portion of the proposed project will have 30 structures located within the 100-year flood plain of any river or stream, three in Segment 3, 22 in Segment 4, and five in Segment 5.

There is limited additional impervious area associated with each structure. The placement of these structures is not expected to result in any increase in flooding. Portions of the Surowiec Substation and the Fickett Road Substation are also located in the 100-year flood plain. The substations will be designed and constructed at a final elevation such that the equipment will not be inundated during a 100-year flood event.

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

17. ALTERATION OF CLIMATE

The Department received extensive public comment, as well as written argument from Groups 3 and 4 and the Applicant, concerning whether and how potential greenhouse gas (GHG) emission reductions resulting from the project have regulatory significance under the applicable permitting standards. Some members of the public testified the project is urgently needed to reduce regional GHG emissions, while others challenged whether such emission reductions would even occur, and argued any such reductions have not been adequately proven. Groups 3 and 4 also asserted that the Department's standards for evaluating adverse environmental effects under Site Law, as set forth in Chapter 375, require the Department to undertake an analysis of a proposed project's impact on global climate change. The relevant section of Chapter 375 reads in its entirety as follows:

2. No Unreasonable Alteration of Climate

A. Preamble. The Department recognizes the potential of large-scale, heavy industrial facilities, such as power generating plants, to affect the climate in the vicinity of their location by causing changes in climatic characteristics such as rainfall, fog, and relative humidity patterns.

B. Scope of Review. In determining whether the proposed development will cause an unreasonable alteration of climate, the Department shall consider all relevant evidence to that effect.

C. Submissions. Applications for approval of large-scale, heavy industrial developments, such as power generating plants, shall include evidence that affirmatively demonstrates that there will be no unreasonable alteration of climate, including information such as the following, when appropriate:

(1) Evidence that the proposed development will not unreasonably alter the existing cloud cover, fog, or rainfall characteristics of the area.

D. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will not cause an unreasonable alteration of climate.

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

Although not relevant under Chapter 375, § 2, the issue of GHG emission reductions is material to the Department's review of this project because its stated purpose is to provide clean, renewable energy to the regional energy grid. The Department considers a project's purpose in the context of evaluating whether the totality of its adverse environmental effects is reasonable. As described in detail above, construction and maintenance of the project will cause some adverse environmental effects on habitat, scenic character, and existing uses. Climate change, however, is the single greatest threat to Maine's natural environment. It is already negatively affecting brook trout habitat, and those impacts are projected to worsen. It also threatens forest habitat for iconic species such as moose, and for pine marten, an indicator species much discussed in the evidentiary hearing. Failure to take immediate action to mitigate the GHG emissions that are causing climate change will exacerbate these impacts. The Maine Public Utilities Commission (PUC), which has jurisdiction necessary to assess GHG emissions from the project in light of its impact on the electricity grid, concluded that, "the NECEC [project] will result in significant incremental hydroelectric generation from existing and new sources in Quebec and, therefore, will result in reductions in overall GHG emissions through corresponding reductions of fossil fuel generation (primarily natural gas) in the region."[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.

18. DECOMMISSIONING REQUIREMENTS

Segment 1is 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.

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,

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.

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.

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 1corridor 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.

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.

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.

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

FILED

MAY 11, 2020

State of Maine
Board of Environmental Protection

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.

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.

STORMWATER STANDARD CONDITIONS

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

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

(1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. §420-D(8) and is subject to penalties under 38 M.R.S.A. §349.

(2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

(3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

(4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.

(5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

(6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been

received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.

(7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.

(8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.

(a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.

(c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

(9) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

November 16, 2005 (revised December 27, 2011)

Special Condition
for
Third Party Inspection Program

THIRD-PARTY INSPECTION PROGRAM

1.0 THE PURPOSE OF THE THIRD-PARTY INSPECTION

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

1) to ensure that all construction and stabilization activities comply with the permit conditions and the MDEP-approved drawings and specifications,

2) to ensure that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations, and

3) to ensure communication between the contractor and MDEP regarding any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan.

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

2.0 SELECTING THE INSPECTOR

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

3.0 THE INSPECTOR'S QUALIFICATIONS

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

1) a degree in an environmental science or civil engineering, or other demonstrated expertise,

2) a practical knowledge of erosion control practices and stormwater hydrology,

3) experience in management or supervision on large construction projects,

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.

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.

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

7.0 INSPECTION REPORTS

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

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

1) The report will state the name of the development, its permit number(s), and the start and end dates for the inspection week (Monday through Sunday).

2) The report will state the date(s) and time(s) when the inspector was on the site making inspections.

3) The report will state the date(s) and approximate duration(s) of any rainfall events on the site for the week.

4) The report will identify and describe any erosion problems that resulted in sediment leaving the property or sediment being discharged into a wetland, brook, stream, river, lake, or public storm sewer system. The report will describe the contractor's actions to repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

5) The report will list the buildings, roads, parking lots, detention basins, stream crossings or other features open to construction for the week, including those features or areas actively worked and those left unworked (dormant).

6) For each area open to construction, the report will list the date of initial soil disturbance for the area.

7) For each area open to construction, the report will note which areas were actively worked that week and which were left dormant for the week. For those areas actively worked, the report will briefly state the work performed in the area that week and the progress toward final stabilization of the area -- e.g. "grubbing in progress", " grubbing complete", "rough grading in progress", "rough grading complete", "finish grading in progress", "finish grading complete", "permanent seeding completed", "area fully stable and temporary erosion controls removed", etc.

8) For each area open to construction, the report will list the erosion and sedimentation control measures installed, maintained, or removed during the week.

9) For each erosion control measure in-place, the report will note the condition of the measure and any maintenance performed to bring it to standard.

Third Party Inspection Form

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

TO: *PM, Maine DEP (@maine.gov)*	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:		
Original and all copies were sent by email only.		

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@androscoggincountymaine.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**

	lpost@androscoggincountymaine.gov		**House District 59** Rep. Roger Jason Fuller 36 Elliott Avenue Lewiston, ME 04240 Phone (207) 783-9091 roger.fuller@legislature.maine.gov **House District 60** Rep. Jared F. Golden 3 Diamond Court Lewiston, ME 04240 Phone (207) 287-1430 jared.golden@legislature.maine.gov **House District 61** Rep. Heidi E. Brooks 1 Pleasant Street, #2 Lewiston, Maine 04240 Cell Phone (207) 740-5229 heidi.brooks@legislature.maine.gov	
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	**Senate District 13** Senator Dana Dow 30 Kalers Pond Road Waldoboro, Maine 04572 Phone (207) 832-4658 dana.dow@legislature.maine.gov	**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	**1**
Town of Anson 5 Kennebec Street, PO Box 297 Anson, Maine 04911-0297	Somerset County Commissioners Office 41 Court Street	**Senate District 3** Senator Rod Whittemore PO Box 96	**House District 112** Rep. Thomas H. Skolfield 349 Phillips Road	**2**

Phone (207) 696-3979	Skowhegan, ME 04976 Phone (207) 474-9861 ddiblasi@SomersetCounty-ME.org	Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislature.maine.gov	Weld, Maine 04285 Phone (207) 585-2638 thomas.skolfield@legislature.maine.gov	
Town of Caratunk Elizabeth Caruso - 1st Select PO Box 180 Caratunk, Maine 04925-0180 OFFICE PHONE: 672-3030	Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 Phone (207) 474-9861 ddiblasi@SomersetCounty-ME.org	**Senate District 3** Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislature.maine.gov	**House District 118** Rep. Chad Wayne Grignon 181 Fox Hill Road Athens, Maine 04912 Phone (207) 654-2771 Cell Phone (207) 612-6499 chad.grignon@legislature.maine.gov	**2**
Town of Chesterville 409 Dutch Gap Road Chesterville, Maine 04938 Phone (207) 778-2433 chesterville.me@gmail.com	Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 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 Cumberland William R. Shane, Town Manager 290 Tuttle Road Cumberland, Maine 04021 Phone (207) 829-5559	Cumberland County Commissioners Office James Gailey, County Manager 142 Federal Street Portland, ME 04101 Phone (207) 871-8380 gailey@cumberlandcounty.org	**Senate District 25** Senator Catherine Breen 15 Falmouth Ridges Drive Falmouth, Maine 04105 Phone (207) 329-6142 Cathy.breen@legislature.maine.gov	**House District 45** Rep. Dale J. Denno 275 Main Street Cumberland Center, Maine 04021 Cell Phone (207) 400-1123 dale.denno@legislature.maine.gov	**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

Town of Durham 630 Hallowell Road Durham, Maine 04222 Phone (207) 353-2561	Androscoggin **County Commissioners' Office** 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincountymaine.gov	**Senate District 22** Senator Garrett Mason PO Box 395 Lisbon Falls, Maine 04252 Phone (207) 557-1521 garret.mason@legislature.maine.gov	**House District 46** Rep. Paul B. Chace 31 Colonial Drive Durham, ME 04222 Cell Phone (207)240-9300 paul.chace@legislature.maine.gov	**2**
Town of Embden 809 Embden Pond Road Embden, Maine 04958-3521 Phone (207) 566-5551 embden-clerk@roadrunner.com	Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 Phone (207) 474-9861 ddiblasi@SomersetCounty-ME.org	**Senate District 3** Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislature.maine.gov	**House District 118** Rep. Chad Wayne Grignon 181 Fox Hill Road Athens, Maine 04912 Phone (207) 654-2771 Cell Phone (207) 612-6499 chad.grignon@legislature.maine.gov	**2**
Town of Farmington 153 Farmington Falls Road Farmington, Maine 04938 Phone (207) 778-5871 rdavis@farmington-maine.org	Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@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 Greene 220 Main St, PO Box 510 Greene, Maine 04236-0510 Phone (207) 946-5146 tmgreene@fairpoint.net	Androscoggin **County Commissioners' Office** 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincountymaine.gov	**Senate District 22** Senator Garrett Mason PO Box 395 Lisbon Falls, Maine 04252 Phone (207) 557-1521 garret.mason@legislature.maine.gov	**House District 57** Rep. Stephen J. Wood PO Box 927 Sabattus, Maine 04280 Cell Phone (207) 740-3723 stephen.wood@legislature.maine.gov	**2**
Town of Industry 1033 Industry Road Industry, Maine 04938 Phone (207) 778-5050	Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@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 Jay 340 Main Street Jay, Maine 04239 Phone (207) 897-6785 joffice@jay-maine.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 74** Rep. Christina Riley 437 Main Street Jay, Maine 04239 Phone (207)897-2288 tina.riley@legislature.maine.gov	**2**
Town of Leeds 8 Community Drive Leeds, Maine 04263 Phone (207) 524-5171 townofleeds@fairpoint.net	Androscoggin **County Commissioners' Office** 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincountymaine.gov	**Senate District 22** Senator Garrett Mason PO Box 395 Lisbon Falls, Maine 04252 Phone (207) 557-1521 garret.mason@legislature.maine.gov	**House District 75** Rep. Jeffrey L. Timberlake 284 Ricker Hill Road Turner, Maine 07282 Cell Phone (207)754-6000 jeffrey.timberlake@legislature.maine.gov	**2**
Town of Livermore Falls 2 Main Street Livermore Falls, Maine 04254 Phone (207) 897-3321 townoffice@lfme.org	Androscoggin **County Commissioners' Office** 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincountymaine.gov	**Senate District 18** Senator Lisa Keim 1505 Main Street Dixfield, ME 04224 Phone (207) 562-6023 Lisa.keim@legislature.maine.gov	**House District 74** Rep. Christina Riley 437 Main Street Jay, Maine 04239 Phone (207)897-2288 tina.riley@legislature.maine.gov	**2**
Town of Moscow 110 Canada Road Moscow, Maine 04920 Phone (207) 672-4834 moscow@myfairpoint.net	Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 Phone (207) 474-9861 ddiblasi@SomersetCounty-ME.org	**Senate District 3** Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislature.maine.gov	**House District 118** Rep. Chad Wayne Grignon 181 Fox Hill Road Athens, Maine 04912 Phone (207) 654-2771 Cell Phone (207) 612-6499 chad.grignon@legislature.maine.gov	**2**
Town of New Gloucester 385 Intervale Road New Gloucester, Maine 04260 Phone (207) 926-4126 ccastonguay@newgloucester.com	Cumberland County Commissioners Office James Gailey, County Manager 142 Federal Street Portland, ME 04101 Phone (207) 871-8380	**Senate District 20** Senator Eric L. Brakey 146 Pleasant Street Auburn, ME 04210 Phone (207) 406-0897 Eric.brakey@legislature.maine.gov	**House District 65** Rep. Ellie Espling 12 Lewiston Rd New Gloucester, Maine 04260 Cell Phone (207) 891-8280 ellie.espling@legislature.maine.gov	**1**

	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 Hallowell 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 Harpswell, 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 ddiblasi@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**

	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**
Town of Wiscasset 51 Bath Road Wiscasset, Maine 04578-4108 Phone (207) 882-8200 admin@wiscasset.org	Lincoln County Commissioners Office 32 High Street, P.O. Box 249 Wiscasset, Maine 04578 Phone (207) 882-6311 ckipfer@lincounty.me	**Senate District 13** Senator Dana Dow 30 Kalers Pond Road Waldoboro, Maine 04572 Phone (207) 832-4658 dana.dow@legislature.maine.gov	**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	**1**
Town of Woolwich 13 Nequasset Road Woolwich, Maine 04579-9734 PHONE (207) 442-7094	Sagadahoc County Commissioner's Office 752 High Street Bath, Maine 04530 Phone (207) 443-8202	**Senate District 23** Senator Eloise Vitelli 73 Newton Road Arrowsic, Maine 04530 Phone (207) 443-4660 eloise.Vitelli@legislature.maine.gov	**House District 53** Rep. Jeffrey K. Pierce PO Box 51 Dresden, Maine 04342 Phone (207) 737-9051 Cell (207)441-3006 jeff.pierce@legislature.maine.gov	**1**

Appendix B
Service List

APPLICANT		
Central Maine Power Company	Gerry Mirabile	gerry.mirabile@cmpco.com
	Matt Manahan	mmanahan@pierceatwood.com
	Mark Goodwin	magoodwin@burnsmcd.com
AGENCY CONTACTS		
Department of Environmental Protection	Susanne Miller, Presiding Officer	Susanne.Miller@maine.gov
	Jim Beyer	NECEC.DEP@maine.gov
	Nicholas Livesay	Nick.Livesay@maine.gov
Land Use Planning Commission	Bill Hinkel	bill.hinkel@maine.gov
Maine Department of Inland Fisheries and Wildlife	Bob Stratton	Robert.D.Stratton@maine.gov
Maine Natural Areas Program	Kristen Puryear	Kristen.Puryear@maine.gov
Maine Historic Preservation Commission	Megan Rideout	Megan.M.Rideout@maine.gov
U.S. Army Corps of Engineers	Jay Clement	Jay.L.Clement@usace.army.mil
Department of Energy	Melissa Pauley	Melissa.Pauley@hq.doe.gov
ASSISTANT ATTORNEYS GENERAL		
Maine Office of the Attorney General	Peggy Bensinger	Peggy.Bensinger@maine.gov
	Lauren Parker	Lauren.Parker@maine.gov
DEP ONLY INTERVENORS		
Friends of Boundary Mountains	Robert Weingarten	bpw1@midmaine.com
Maine Wilderness Guides	Nick Leadley	leadley@myfairpoint.net
West Forks Plantation	Ashli Coleman	ashli.goodenow@gmail.com
Old Canada Road	Bob Haynes	oldcanadaroad@myfairpoint.net
Brookfield Renewable	Steven Zuretti	Steven.Zuretti@brookfieldrenewable.com
	Jeffery Talbert	jtalbert@preti.com
The Nature Conservancy	Rob Wood	robert.wood@tnc.org
Conservation Law Foundation	Emily Green	egreen@clf.org
	Phelps Turner	pturner@clf.org
LUPC ONLY INTERVENORS		
Carrie Carpenter[(1)]		Carrie_carpenter@rocketmail.com
Eric Sherman[(1)]		eshermanbpr@gmail.com
Kathy Barkley[(1)]		kbraft@gmail.com
Kim Lyman[(1)]		klyman9672@gmail.com
Mandy Farrar[(1)]		manfarr1974@yahoo.com
Matt Wagner[(1)]		mwagner@insourcerenewables.com

[1] These Intervenors are represented by Elizabeth Beopple, Esq., BCM Environmental & Land Law, PLLC.

LUPC ONLY INTERVENORS		
Noah Hale[1]		1withwhitewaters@gmail.com
Taylor Walker[1]		twalkerfilm@gmail.com
Tony DiBlasi[1]		diblasi.tony@gmail.com
Lewiston Auburn Metropolitan Chamber of Commerce[2]		maureen@lametrochamber.com
DEP AND LUPC INTERVENORS		
Mike Pilsbury[1]		mspils15@hotmail.com
Town of Caratunk[1]	Elizabeth Caruso	caratunkselectmen@myfairpoint.net
Kennebec River Anglers[1]	Chris Russell	info@kennebecriverangler.com
Maine Guide Service[1]	Greg Caruso	gcaruso@myfairpoint.net
Edwin Buzzell[1]	Edwin Buzzell	edbuzzel@gmail.com
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[3] Maine Office of the Public Advocate is not an Intervenor with the LUPC but, as a governmental agency, may still participate in the LUPC's portion of the NECEC hearing in accordance with Chapter 5, section 5.16. The OPA is an Intervenor in the DEP's hearing.

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Appendix C
Vegetation Management

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

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

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

Full Canopy Height Vegetation

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

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

35-Foot Minimum Vegetation Height

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

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

Deer Travel Corridors

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

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

Table C-1

Area Name	From Structure	To Structure	Location	Min. Veg Height	Notes	Approximate Length (miles)
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	Hobbstown Twp T7 BKP WKR Bradstreet Twp	35'	Includes area near Moose Pond and surrounding land owned by BPL, Whipple Brook crossing, areas adjacent to Leuthold Preserve, and unnamed stream crossing where topography may allow crossing without taller poles (structures 3006-708 to 3006-707)	4.87
Wildlife Area 6	3006-635	3006-633	Johnson Mtn Twp	Full canopy height	Mountain Brook crossing, includes Roaring Brook Mayfly habitat	0.38
Wildlife Area 7	3006-598	3006-597	Johnson Mtn Twp	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

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 approximately14.08 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:

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Segment	Town	Feature ID	Stream Name[1]	Ave. Stream Width (ft)[2]	Stream Type (PER/ INT)[3]	Atlantic Salmon Habitat (Y/N)[6]	Brook Trout[7] (Y/N)	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 Plt	ISTR-45-02	Trib. to Tomhegan Stream	4	INT	N	Y	281	150	N	100
1	Bradstreet Twp	ISTR-SRD1-28-03	Fourmile Brook	4	INT	N	N/A	5	150	Y	63
1	Skinner Twp	PSTR-05-02	Smart Brook	4	PER	N	Y	8	150	N	13
1	Skinner Twp	PSTR-09-06	Trib. to South Branch Moose River	4	PER	N	Y	100	150	N	22, 23
1	Appleton Twp	PSTR-14-30	Trib. to Barrett Brook	4	PER	N	Y	185	150	N	33
1	Appleton Twp	PSTR-14-36	Trib. to Barrett Brook	4	PER	N	Y	329	150	N	33
1	Appleton Twp	PSTR-14-68	Trib. to Barrett Brook	4	PER	N	Y	109	150	Y	32
1	Appleton Twp	PSTR-15-04	Trib. to Gold Brook	4	PER	N	Y	93	150	N	35, 36
1	Appleton Twp	PSTR-16-14	Trib. to Gold Brook	4	PER	N	Y	176	150	N	37
1	T5 R7 BKP WKR/Hobbstown Twp	PSTR-18-06	Trib. to Fish Pond	4	PER	N	Y	527	150	N	42

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

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

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

Segment	Town	Feature ID	Stream Name[1]	Ave. Stream Width (ft)[2]	Stream Type (PER/ INT)[3]	Atlantic Salmon Habitat (Y/N)[6]	Brook Trout[7] (Y/N)	Nearest New Structure Location (ft)	Temp. Equip. Crossing[9] (Y/N)	Natural Resource Map/Sheet Number
1	Johnson Mountain Twp	PSTR-SR-31-01	Piel Brook	10	PER	N	Y	219	N	70
1	Bradstreet Twp	PSTR-SRD1-28-01	Fourmile Brook	10	PER	N	Y	6	N	63
1	T5 R7 BKP WKR/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

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

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

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

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

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

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

Segment	Town	Feature ID	Stream Name[1]	Ave. Stream Width (ft)[2]	Stream Type (PER/ INT)[3]	Atlantic Salmon Habitat (Y/N)[6]	Brook Trout[7] (Y/N)	Nearest New Structure Location (ft)	Temp. Equip. Crossing[9] (Y/N)	Natural Resource Map/Sheet Number
3	Jay	ISTR-114-02	Trib. to Wilson Stream	3	INT	Y	N/A	107	N	253
3	Chesterville	ISTR-114-03	Trib. to Wilson Stream	6	INT	Y	Y	349	Y	253
3	Jay	ISTR-116-02	Trib. To Sugar Brook	8	INT	Y	Y	140	Y	256
3	Jay	ISTR-117-01	Trib. to Fuller Brook	2	INT	Y	N/A	86	Y	259
3	Livermore Falls	ISTR-127-01	Trib. to 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

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

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

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

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

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

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

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

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

Segment	Town	Feature ID	Stream Name[1]	Ave. Stream Width (ft)[2]	Stream Type (PER/ INT)[3]	Atlantic Salmon Habitat (Y/N)[6]	Brook Trout[7] (Y/N)	Nearest New Structure Location (ft)	Temp. Equip. Crossing[9] (Y/N)	Natural Resource Map/Sheet Number
3	Livermore Falls	ISTR-128-02	Trib. to 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

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

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 n River	3	INT	N	N/A	330	Y	287, 288
3	Leeds	ISTR-131-02	Trib. To Dead River	3	INT	N	N/A	142	N	291
3	Leeds	ISTR-132-01	Trib. To Dead River	3	INT	N	N/A	190	N	292
3	Greene	ISTR-138-03	Trib. to Allen Stream	3	INT	N	N/A	295	N	306
3	Greene	ISTR-140-04	Trib. to Allen Pond	3	INT	N	N/A	215	N	309
3	Greene	ISTR-140-05	Trib. to Allen Pond	3	INT	N	N/A	199	N	309
3	Starks	ISTR-96-04	Trib. to Pelton Brook	3	INT	Y	N/A	524	N	212
3	Jay/Livermore Falls	PSTR-121-02	Trib. to Clay Brook	3	PER	N	N/A	138	N	268, 269
3	Jay	PSTR-121-04	Trib. to Clay Brook	3	PER	N	N/A	92	N	267, 268, 269
3	Livermore Falls	PSTR-128-01	Trib. to Androscoggin n River	3	PER	N	N/A	108	Y	282, 283
3	Leeds	PSTR-133-01	Trib. to Allen Stream	3	PER	N	N/A	113	Y	295
3	Starks	PSTR-96-02	Trib. to Pelton Brook	3	PER	Y	Y	334	N	212
3	Livermore Falls	ISTR-123-01	Trib. to Clay Brook	4	INT	N	N/A	110	N	272
3	Livermore Falls	PSTR-125-02	Trib. to Androscoggin n River	2	INT	N	N/A	295	Y	277
3	Livermore Falls	ISTR-125-05	Trib. to Androscoggin n River	4	INT	N	N/A	319	N	277
3	Leeds	ISTR-131-01	Trib. to Dead River	4	INT	N	N/A	15	Y	289
3	Greene	ISTR-138-01	Trib. to Allen Pond	4	INT	N	N/A	24	N	307

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

Segment	Town	Feature ID	Stream Name[1]	Ave. Stream Width (ft)[2]	Stream Type (PER/ INT)[3]	Atlantic Salmon Habitat (Y/N)[6]	Brook Trout[7] (Y/N)	Nearest New Structure Location (ft)	Temp. Equip. Crossing[9] (Y/N)	Natural Resource Map/Sheet Number
3	Lewiston	PSTR-146-03	Trib. to 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

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

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 n River	645	PER	Y	N/A	104	N	344

Segment	Town	Feature ID	Stream Name[1]	Ave. Stream Width (ft)[2]	Stream Type (PER/ INT)[3]	Atlantic Salmon Habitat (Y/N)[6]	Brook Trout[7] (Y/N)	Nearest New Structure Location (ft)	Temp. Equip. Crossing[9] (Y/N)	Natural Resource Map/Sheet Number
5	Wiscasset	ISTR-183-01	Trib. to Montsweag Brook	2	INT	Y	N/A	140	N	370
5	Wiscasset	ISTR-188-09	Trib. to Back River/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

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

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

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

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

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

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

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

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

Notes:

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

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.

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

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

Resource Type & Impact	Agency Requiring	Form of Compensation	Amount of Compensation
9.229 acres of forested conversion in Unique Natural Communities	MNAP	Fee contribution to Maine Natural Areas Conservation Fund	$1,224,526.82
Forested conversion to the Goldie's Wood Fern	MNAP	Funding for rare plant surveys to the Maine Natural Areas Conservation Fund	$10,000
26.416 acres of forest conversion in Roaring Brook Mayfly and Northern Spring Salamander Conservation Management Areas	MDIFW	Fee contribution to Maine Endangered and Nongame Wildlife Fund	$469,771.95
39.209 acres of forest conversion in the Upper Kennebec Deer Wintering Area	MDIFW	Preservation	Seven parcels, totaling 717 acres of land in the Upper Kennebec DWA
Habitat and fisheries impacts, including 11.02 linear miles of forested conversion in 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**

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

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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PHONE: 207-287-2631
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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.

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.

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 criteria[6] 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.

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.

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 Intervenors 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[***]

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 prefiling 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.

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.

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.

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 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.

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.

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).

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.

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.

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 ½ 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.

> 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.

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, page2
[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.

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.

witness testified that underground construction is a 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.

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

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.

	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

	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.

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.

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.

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.

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.

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.

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.

- 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).

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.

in excess of legal dimension and weight limits on roads and bridges maintained by the Maine Department of Transportation must obtain an overlimit 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.

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.

> 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).

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.

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.

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).

> 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.

- 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

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.

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.

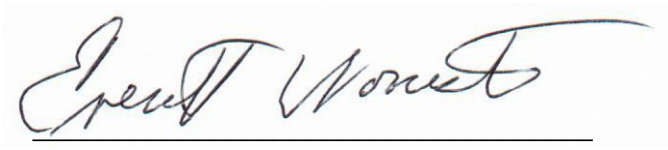
3. CMP shall comply with its Construction Vegetation Clearing Plan and Post-Construction Vegetation Management Plan.

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.

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.

EXHIBIT C

STATE OF MAINE
BOARD OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

Susan M. Lessard, Chair

William F. Hinkel
Executive Analyst

Ruth Ann Burke
Board Clerk

July 22, 2022

SENT VIA ELECTRONIC MAIL AND CERTIFIED MAIL

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RE: Appeal of Central Maine Power Company's Site Location of Development and Natural Resources Protection Act permit applications for the New England Clean Energy Connect project, L-27625-26-A-N, L-27625-TG-B-N, L-27625-2C-C-N, L-27625-VP-E-N, L-27625-IW-F-N, by Natural Resources Council of Maine, NextEra Energy and the West Forks Group

Appeal of the Commissioner's Transfer Order approving partial transfer of the NECEC Order to NECEC Transmission, LLC #L-27625-26-K-T, by Natural Resources Council of Maine

Board Findings of Fact and Order on Appeal

Dear Participants:

Attached, please find a copy of the Board of Environmental Protection's July 21, 2022 decision on the appeals of Natural Resources Council of Maine, NextEra Energy Resources, LLC, and West Forks of the Commissioner's Order approving Central Maine Power Company's Site Location of Development and Natural Resources Protection Act permit applications for the New England Clean Energy Connect project, #L-27625-26-A-N, L-27625-TG-B-N, L-27625-2C-C-N, L-27625-VP-E-N, L-27625-IW-F-N; and Appeal of Natural Resources Council of Maine of the Commissioner's Transfer Order approving partial transfer of the NECEC Order to NECEC Transmission LLC, #L-27625-26-K-T.

Maine law generally allows aggrieved persons to appeal final Board licensing decisions to Maine's Superior Court. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered.

If you have any questions regarding the Board's decision, you may contact Board Executive Analyst William Hinkel (bill.hinkel@maine.gov or 207-314-1458) or Assistant Attorney General Peggy Bensinger (peggy.bensinger@maine.gov) or 207-626-8578).

Sincerely,



Ruth Ann Burke, Administrative Assistant
Board of Environmental Protection

Attachments: Board Decision on Appeal
DEP Information Sheet *Appealing a Department Licensing Decision*

cc: Service List w/ attachments

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

BOARD ORDER

IN THE MATTER OF

CENTRAL MAINE POWER COMPANY	)	
NECEC TRANSMISSION LLC	)	
See Appendix A for Location	)	
NEW ENGLAND CLEAN	)	
ENERGY CONNECT	)	SITE LOCATION OF DEVELOPMENT ACT
	)	NATURAL RESOURCES PROTECTION ACT
APPEALS filed by	)	
	)	
NATURAL RESOURCES	)	
COUNCIL OF MAINE	)	
	)	
NEXTERA ENERGY RESOURCES, LLC	)	
	)	
WEST FORKS PLANTATION,	)	
TOWN OF CARATUNK, KENNEBEC	)	
RIVER ANGLERS, MAINE GUIDE	)	APPEALS
SERVICE, HAWKS NEST LODGE,	)	
EDWIN BUZZELL, KATHY BARKLEY,	)	FINDINGS OF FACT AND ORDER
KIM LYMAN, NOAH HALE,	)	
ERIC SHERMAN, MATT WAGNER,	)	
MIKE PILSBURY, MANDY FARRAR, AND	)	
CARRIE CARPENTER	)	
	)	
L-27625-26-F-Z	)	
L-27625-TG-G-Z	)	
L-27625-2C-H-Z	)	
L-27625-VP-I-Z	)	
L-27625-IW-J-Z	)	
L-27625-26-AB-Z	)	
APPEALS DENIED	)	

The Board of Environmental Protection (Board) has considered the appeals of the license decisions captioned above that were issued to Central Maine Power Company (CMP) and NECEC Transmission LLC (NECEC LLC).

The appellants are:

- Natural Resources Council of Maine (NRCM),
- NextEra Energy Resources, LLC (NextEra), and

- West Forks Plantation, Town of Caratunk, Kennebec River Anglers, Maine Guide Service, LLC, Hawks Nest Lodge, Edwin Buzzell, Kathy Barkley, Kim Lyman, Noah Hale, Eric Sherman, Matt Wagner, Mike Pilsbury, Mandy Farrar, and Carrie Carpenter (a group collectively referred to as West Forks).

These appeals are decided pursuant to the provisions of 38 M.R.S. §§ 480-A–480-JJ; 38 M.R.S §§ 481-489-E; and the Department's rules, including: Chapter 2, *Rule Concerning the Processing of Applications and Other Administrative Matters*; Chapter 310, *Wetlands and Waterbodies Protection*; Chapter 315, *Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Resources*; Chapter 335, *Significant Habitat,* Chapter 373, *Financial and Technical Capacity Standards of the Site Location of Development Act;* and Chapter 375, *No Adverse Environmental Effect Standard of the Site Location of Development Act.*

The Board has considered the administrative record on appeal, including the supplemental evidence admitted into the record, and FINDS THE FOLLOWING FACTS:

OVERVIEW

1. BACKGROUND

In Department Order # 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 (the Department Order or Order), dated May 11, 2020, the Commissioner of the Department approved an application submitted by CMP for the New England Clean Energy Connect (NECEC) project. This project consists of a 145-mile-long high voltage direct current (HVDC) transmission line from Beattie Township to Lewiston, a new converter station, a new substation, a new 345-kilovolt (kV) transmission line between the two, and upgrades to several existing transmission lines and substations. The approval was issued following a review process that lasted approximately two and a half years and included six days of public hearings. The project as approved, especially in the area where there is a new corridor, was significantly modified from the original proposal. A more complete project description is below in Section 6(A).

The Commissioner approved the partial transfer of the permit for the HVDC line and the converter station portions of the project from CMP to NECEC LLC (collectively Licensees) in Department Order # L-27625-26-K-T (the Transfer Order), dated December 4, 2020.

Both the Department Order and the Transfer Order are the subject of these consolidated appeals, as discussed below.

2. PROCEDURAL HISTORY

On June 8, 2020, the Department Order was appealed by two separate parties to two separate courts. NextEra appealed the Department Order to the Kennebec County Superior Court and West Forks appealed to the Somerset County Superior Court.

On June 10, 2020, NRCM filed an administrative appeal with the Board, requesting that the Board vacate the Department Order and exercise original jurisdiction over the license applications or, in the alternative, conduct a hearing on the appeal of the Department Order.

On August 11, 2020, in response to motions filed by the Department requesting the remand of the two judicial appeals to the Board, the Superior Court consolidated the NextEra and West Forks Rule 80C appeals and remanded the appeals to the Board to be considered alongside NRCM's administrative appeal. The Court directed the Board to provide NextEra and West Forks the opportunity to file with the Board more detailed written appeal statements of the arguments made in their judicial appeals.[1]

On September 25, 2020, NextEra, and West Forks each filed an appeal statement with the Board, and each requested a hearing.

On September 25, 2020, NECEC LLC submitted to the Department applications for partial transfer of the Department Order for the NECEC project. NECEC LLC included in its submission an application for partial transfer of the Site Location of Development (Site Law) permit that was issued as part of the Department Order, as well as a Permit by Rule notification form for partial transfer of the Natural Resources Protection Act (NRPA) permit that also was issued as part of the Department Order.

On October 7, 2020, NRCM requested by letter that the Board assume original jurisdiction over the transfer application, hold a public hearing, and consolidate the application for a partial transfer with the pending appeals of underlying Department Order. By letter dated October 27, 2020, the Board Chair declined the requests, explaining that the Board's rules do not provide for consolidation of these different types of proceedings.

On October 13, 2020, the Department accepted NECEC LLC's Permit by Rule notification for the transfer of the NRPA permit for the NECEC project. (The acceptance, which constitutes an approval decision of the Commissioner, was not appealed.)

On December 4, 2020, the Acting Commissioner issued the Transfer Order (# L-27625-26-K-T) approving the partial transfer of the Department Order related to the Site Law permit for the project.

On January 4, 2021, NRCM filed a request to vacate the December 4, 2020 Transfer Order and, in the alternative, appealed the Transfer Order to the Board. NRCM requested that the Board consolidate the appeal with the appeals of the Department Order and that the Board hold a hearing on the appeal.

[1] After the Commissioner issued the Department Order and during the course of the pending appeals of this Order before the Board, NRCM and West Forks filed several requests for a stay of the Order with the Commissioner and Board. The requests for a stay were denied by the Commissioner by letters dated August 26, 2020, August 4, 2021, August 20, 2021, and Nov. 23, 2021, and by the Board Chair by letter dated January 19, 2021. NRCM also filed a request for stay with the Superior Court, which the court denied by order dated January 8, 2021.

On January 19, 2021, the Board Chair found that "[t]he Board's authority to vacate a Commissioner licensing decision lies within the context of an appeal" and accepted NRCM's January 4, 2021 filing as an appeal of the Transfer Order. The Board Chair consolidated NRCM's appeal of the Transfer Order with the three appeals of the Department Order.

On February 18, 2021, CMP and NECEC LLC filed a response to NRCM's appeal of the Transfer Order. On the same day, West Forks also filed a response to NRCM's appeal of the Transfer Order.

On March 12, 2021, a number of entities, including the Licensees and Intervenors in the proceeding below, filed responses to the NRCM, NextEra, and West Forks appeals of the Department Order. Responses were filed by: CMP and NECEC LLC, jointly; Friends of the Boundary Mountains; the Maine State Chamber of Commerce, the Lewiston-Auburn Metro Chamber of Commerce, and the City of Lewiston, jointly; and the Industrial Energy Consumer Group.

Also, on March 12, 2021, West Forks filed a response to the NRCM and NextEra appeals and NRCM filed a response to the appeals by West Forks and NextEra. CMP and NECEC LLC objected to these two responses and, on September 30, 2021, the Chair found that while NRCM and West Forks may not re-argue or further support their own appeals, they are entitled to submit a response to the merits of each other's appeals, and to provide a response to NextEra's appeal.[2]

On November 23, 2021, based on a change of circumstances, the Commissioner issued a Decision and Order suspending the licenses issued pursuant to the Department Order (the Suspension Order). Pursuant to the terms of the Suspension Order, so long as the licenses are suspended all construction must stop. The suspension is to remain in place unless and until final disposition of the legal challenges in *NECEC Transmission LLC, et al. v. Bureau of Parks and Lands, et al.* in favor of the Licensees. As of the date of this Board decision, the suspension remains in place.

The appeals of the Department Order are discussed in Sections 3 through 14 below. The appeal of the Transfer Order is discussed in Section 15 below.

APPEAL OF DEPARTMENT ORDER

3. BASES FOR APPEAL

As discussed in more detail below, one or more appellants assert:

A. Because CMP entered into a stipulation agreement as part of the Certificate of Public Convenience and Necessity proceeding before the Public Utilities Commission (PUC)

[2] With respect to the record on appeal, by letters dated January 8,2021, and February 12, 2021, the Board Chair ruled on proposed supplemental evidence contained in the appeals of the Department Order. A number of documents proposed as supplemental evidence were not admitted and certain statements made in the appeal documents were stricken. On September 30, 2021, the Board Chair ruled on objections to certain statements offered in the March 12, 2021 responses to the merits of the appeals and the Chair struck extra record statements from the responses.

which required CMP to partially transfer the project to NECEC LLC, the Department was barred from processing the application because CMP lacked sufficient title, right, or interest (TRI) in the property proposed for development. The Department also erred when it accepted the leases between CMP and the Bureau of Public Lands (BPL) as a showing of sufficient TRI. Department Rule Chapter 2.

B. The Commissioner lacked authority to review the project because it meets at least three of the four criteria to be considered a project of statewide significance, and therefore the Board was required to make the original license decision. 38 M.R.S § 341-D(2) and Department Rule Chapter 2.

C. The permit requirement for tapered vegetation as mitigation for visual impacts is not supported by evidence in the record. NRPA Standards 38 M.R.S. § 480-D(1), Site Law Standards 38 M.R.S. § 484(3) and Department Rules, Chapters 315 and 375.

D. The Commissioner erred in finding that the applicant conducted an adequate alternatives analysis. NRPA Standards 38 M.R.S. § 480-D(3), Site Law 38 M.R.S. § 487-A(4), and Department Rules, Chapters 310, 335, and 375.

E. The Commissioner erred in finding that project would not unreasonably impact fish and wildlife habitat. NRPA Standard 38 M.R.S. § 480-D(3), Site Law Standard 38 M.R.S. § 484(3), and Department Rules, Chapters 310, 335, and 375.

F. The proposed compensation, including measures imposed in the Conditions of Approval, does not adequately compensate for functions and values lost as a result of the project. NRPA Standards 38 M.R.S. § 480-D(3) and Department Rules, Chapters 310, 335, and 375.

G. The Department Order is legally deficient because the vegetation management required by the Department Order conflicts with federally required safety standards.

H. The Commissioner erred by disallowing testimony at the hearing and evidence on greenhouse gas emissions and failed to adequately consider greenhouse gas emissions.

I. The decommissioning plan required by the Department Order contains financial capacity requirements that do not conform to standards set forth in 38 M.R.S. § 484(1) as interpreted by Department Rule, Chapter 373.

4. REMEDIES REQUESTED

NRCM, NextEra, and West Forks all request that the Board hold a public hearing, allow supplemental evidence, and vacate the Department Order.

5. STANDING

The appellants were all Intervenors in the original licensing proceeding, and the Board finds they demonstrated in the proceeding below that they qualify as aggrieved persons, including for the purpose of this appeal, as defined in Chapter 2, § 1(B).

6. PROJECT DESCRIPTION AND ADMINISTRATIVE BACKGROUND

A. Overview

The Department Order authorizes construction of a 145.3-mile-long, 320-kV HVDC transmission line from Beattie Township to Lewiston; a converter station on Merrill Road in Lewiston to convert the Direct Current (DC) electricity to Alternating Current (AC) electricity; 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 Order also authorizes the Licensees 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 Licensees divided the project into five transmission line segments and construction or upgrades of substations.

Segment 1 is an approximately 53.1-mile-long, 320-kV DC transmission line that starts at the Maine/Quebec border in Beattie Township and continues to The Forks Plantation. During the course of the permit review process, CMP modified its original 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 areas[3] on either side of all perennial streams in Segment 1.

On September 18, 2019, while the application was still pending before the Department, but after the record had been closed, CMP submitted a Petition to Reopen the Record to allow it to amend the pending application in response to certain concerns raised by the Intervenors. The Presiding Officer allowed the reopening and the amendment of the application. The amendment modified the route of a short section of the Segment 1 corridor in the area near Beattie Pond. This alternative, the Merrill Strip Alternative, initially was rejected by CMP due to the cost to obtain the land from the landowner. The Merrill Strip Alternative is approximately 0.4 miles shorter than the originally proposed route, reduced visual impacts from Beattie Pond, resulted in one less pole (also referred to as a transmission line structure or structure), reduced the wetland impact by

[3] Department Order, Appendix C discusses riparian filter areas.

12,286 square feet, and eliminated impacts to one Significant Vernal Pool (SVP) and one stream that contains brook trout.[4]

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. This segment is co-located with the existing line that runs from Harris Dam to the Wyman Substation.

Segment 3 runs from the Wyman Substation in Moscow to the Merrill Road Converter Station in Lewiston. Construction of this converter station is authorized in the Order. This segment is 71.1 miles long and is co-located with transmission lines in an existing right of way (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 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 substation on Fickett Road in Pownal. Segment 4 will not require any additional clearing.

Segment 5 consists of a 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.

The Merrill Road Converter Station will be a new facility and 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, along with the access road, will occupy 13.4 acres of the site. 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 previously permitted as part of the Maine Power Reliability Program. Additionally, there will be upgrades at the Coopers Mills, Crowley's, Larrabee Road, Maine Yankee, Surowiec, and the Raven Farm Substations.

Following issuance of the Department Order approving the project, the Licensees started construction of the project in January 2021. Construction stopped with issuance of the Suspension Order on November 23, 2021. During the period construction was underway, the Licensees completed most of the clearing on Segments 1, 2, 3, and 5; installed 92 structures on Segments 2 and 3; installed 38 structures on Segment 5; and constructed an access road, removed ledge, and placed aggregate at the Merrill Road Converter Station. No construction on Segment 4 or the substations has occurred.

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

B. 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 Commissioner determined that a public hearing would be held on this project pursuant to Chapter 2, § 7(B). The Commissioner designated a Presiding Officer to conduct the hearing, but retained the ultimate decision-making authority.

On December 7, 2017, the Land Use Planning Commission (LUPC) voted to hold a public hearing related to its Certification process for the NECEC project. The LUPC and the Department Commissioner decided to hold a joint hearing in the interest of efficiency for public participation, the parties, and the two agencies.

The Department received 22 petitions for leave to intervene in the proceeding. Those granted intervenor status were consolidated into 10 groups, as follows:

Group 1: Friends of the Boundary Mountains, Maine Wilderness Guides Organization, and Old Canada Road National Scenic Byway. 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, Maine Guide Services, 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: International Energy Consumer Group; City of Lewiston; International Brotherhood of Electrical Workers; Maine Chamber of Commerce; and 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 LUPC proceedings. The Lewiston/Auburn Chamber of Commerce was an intervenor in the LUPC proceeding only.

Group 4: NRCM, Appalachian Mountain Club, and Trout Unlimited. These intervenors were opposed to the project and were intervenors in both the Department and LUPC 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 LUPC's proceeding.

Group 6: The Nature Conservancy (TNC) and Conservation Law Foundation. These intervenors were neither for nor against the project and were Department-only intervenors.

Group 7: Western Mountains and Rivers Corporation was in support of the project and was an intervenor in both the Department and LUPC proceedings.

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

Group 9: Office of the Public Advocate. The Office of the Public Advocate was neither for nor against the project, was granted intervenor status in the Department proceeding, and was granted status as a governmental entity in the LUPC proceeding.

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

After consideration of input from the parties, the Department's Second Procedural Order identified the licensing criteria that would be topics to be covered at the hearing. The remaining criteria would be addressed through written evidence and argument. The hearing topics included:

A. Scenic Character and Existing Uses – 38 M.R.S. § 480-D(1), 38 M.R.S. § 484(3), Department Rules 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 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, Northern Spring Salamanders
    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 Chapters 310, 315, and 335: The applicant must demonstrate that the proposed project would not unreasonably impact "protected natural resources" as defined by the NRPA, considering 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 Chapters 310 and 375, § 15. The applicant must demonstrate compensation for impacts to certain resources.
    i. Coldwater Fisheries Habitats
    ii. Outstanding River Segments
    iii. Wetlands

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 written evidence and argument, including comments, data, and reports, on this topic until the close of the record.

The Department conducted five days of public hearing from April 1 through April 5, 2019, with the LUPC 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.

The hearing continued for a sixth day on May 9, 2019, with testimony largely focused on habitat fragmentation and the alternatives analysis, including the underground alternative. The Commissioner attended.

At the close of the hearing on May 9, 2019, the Presiding Officer allowed the record to remain open for specific evidence items to be entered into the record by May 17, 2019, and responses from parties to that evidence until May 24, 2019. On May 17, 2019, CMP provided cost estimates for several underground alternatives, a summary of structure height changes necessary to maintain 35-foot-tall vegetation along with a visual impact assessment, and typical cross section of waterbody with 35-foot-tall vegetation. 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 LUPC conducted separate site visits to areas of interest, some suggested by the parties, pertaining to the project.

On October 3, 2019, at CMP's request, the Presiding Officers issued the 15th Procedural Order reopening the record to allow CMP 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 on the application amendment.

7. TITLE, RIGHT, OR INTEREST

Pursuant to Chapter 2, § 11(D), an applicant must "demonstrate to the Department's satisfaction sufficient title, right, or interest in all of the property that is proposed for development or use." This can be in the form of deeds, leases, or easements, among other forms. Sufficient TRI must be maintained throughout the entire application processing period. When TRI is based on a lease of the property, "[t]he lease . . . must be of sufficient duration and terms, as determined by the Department, to permit the proposed construction and reasonable use of the property, including reclamation, closure and post closure care, where required." Chapter 2, § 11(D)(2). While a demonstration of sufficient TRI is required for the Department to process an application, TRI is not a substantive licensing criterion.

Along with its application, CMP submitted deeds or leases for the land to be developed or used for the entire project. Included in the submissions was the December 2014 Transmission Line Lease (2014 Lease) between CMP and the State of Maine, Department of Agriculture, Conservation and Forestry, Bureau of Public Lands for approximately 33 acres of public reserved land located in West Forks Plantation and Johnson Mountain Township. The 2014 Lease specifies that the land is leased for a 300-foot wide by 0.9-mile-long transmission line corridor. The 2014 Lease has a term of 25 years.

NRCM and West Forks argue in their appeals that the 2014 Lease did not provide CMP with sufficient title, right or interest. The Friends of the Boundary Mountains submitted a response supporting NRCM's and West Forks' arguments on TRI. In their response to the appeals, CMP and NECEC LLC argued that the Department was correct in its determination that CMP made a sufficient showing of TRI.

A. Legality of 2014 Lease

NRCM argues that the 2014 Lease is illegal and therefore was insufficient evidence to demonstrate TRI in the public reserved lands that are the subject of this lease. First, NRCM argues that BPL issued the lease in 2014 before issuance of the Certificate of Public Convenience (CPCN) by the Maine PUC in 2019. According to NRCM, the 2014 Lease therefore violates 35-A M.R.S. § 3132(13), which requires that the State not sell or lease any interest in public land to any person for the purpose of constructing a transmission line (subject to the section) unless the person has received a Certificate of Public Convenience and Necessity from the PUC. Second, NRCM contends that construction of the NECEC would substantially alter the State public reserved land subject to the 2014 Lease and Article IX, Section 23 of the Maine Constitution requires that any substantial alteration of public reserved lands receive a 2/3 vote of approval by the Legislature, but BPL did not obtain such a vote. NRCM further argues that, at a minimum, the Commissioner should have conditioned the Department Order on CMP gaining legislative approval of the 2014 Lease.

The Board rejects the argument that the Department was required to undertake an in-depth legal analysis of the validity of the 2014 Lease before finding sufficient TRI under Chapter 2, § 11(D). Determining the legality of the lease in light of the legal challenges to it made by NRCM in its

appeals of the decisions made by BPL, which are the same arguments raised by NRCM in this appeal, is the province of, first BPL, and then the courts. In accepting the lease as a sufficient demonstration of TRI and processing the application, the Department accorded to its sister agency the presumption that its decision was valid. The Board takes official notice of the Superior Court decision in *Black v. Cutko*, BCDWB-CV-2020-29 (Bus. & Consumer Ct., Aug. 10, 2021, Murphy, J.) (litigation challenging 2014 and 2020 leases) (among other things, reversing the Director of the Bureau of Parks and Lands' decision to enter into the 2020 Lease[5]), a decision which is currently on appeal to the Maine Law Court. The eventual outcome of the appeal is unknown, but in any event, even if a lease (or other property interest) may be invalidated as a result of litigation after a permit is issued, this does not affect whether CMP demonstrated to the Department's satisfaction sufficient TRI in the property to warrant processing the application. The Board finds that the Commissioner appropriately and reasonably accepted the decision of another State agency to enter into the 2014 Lease, and the evidence of the fully executed lease, consistent with Chapter 2, § 11(D)(2), which identifies provision of a lease as an acceptable means of demonstrating TRI, was adequate to show sufficient TRI for the processing of the application in that portion of the proposed corridor on public reserved lands.

B. Lease Term Duration

Additionally, NRCM argues, in its "Memorandum in Support of Appeals by NextEra and Groups 2 and 10" (dated March 12, 2021), that the 25-year term of the 2014 Lease was not of sufficient duration to be found to be sufficient TRI for this project pursuant to the requirements of Chapter 2, § 11(D)(2). NRCM contends that an adequate lease should be for a term of over 40 years to be sufficient for TRI for construction, reasonable use, and decommissioning of the project. NRCM did not raise this argument in its appeal. This argument appears only in NRCM's response to support the appeals of NextEra and West Forks, neither of which raised this issue. The argument, therefore, was not brought before the Board in a timely manner, in an appeal, and is waived.

Even if the argument was not waived, the Board rejects the contention that the 25-year lease was not of an adequate length for the Commissioner to find sufficient TRI. Pursuant to 12 M.R.S. § 1852(4), leases of public reserved land for utilities and rights-of-way, including for electric power transmission, may not legally exceed a term of 25 years. The Board, however, is aware of no statute that prohibits renewal of such leases, whether on the same or different terms.

Regarding NRCM's argument that some of the Transmission Service Agreements have terms up to 40 years, evidence in the record shows that CMP's obligations are to deliver energy to the Massachusetts utilities for 20 years. The Power Purchase Agreements between H.Q. Energy Services (U.S.) Inc. and the Massachusetts utilities are all for 20 years, and the three corresponding Transmission Service Agreements between CMP and the Massachusetts utilities are for 20 years. The remaining four Transmission Service Agreements that extend up to 40 years are between CMP and H.Q. Energy Services (U.S.) Inc., and the Massachusetts utilities are not parties. These Transmission Service Agreements are for available capacity on the transmission line, not for power that CMP is contractually obligated to deliver to Massachusetts.

[5] On June 23, 2020, the Bureau of Parks and Lands and CMP entered into a revised lease which terminated and superseded the 2014 lease. Both the 2014 Lease and the 2020 Lease allows the assignment of the lease with the consent of the lessor, the Bureau of Parks and Lands, and "which consent shall not be unreasonably withheld."

While the life of the NECEC project may extend beyond the 20-year contractual commitments with the Massachusetts utilities, the 25-year term of the 2014 Lease was of sufficient duration for a showing of TRI given the terms of the contractual commitments with the Massachusetts utilities and given that nothing precludes lease renewal. While decommissioning required in the Department Order could possibly occur more than 25 years in the future, nothing prevents the State from renewing a lease to allow for decommissioning.

C. Stipulation for Transfer to NECEC LLC

Finally, NRCM and West Forks argue that the 2019 Stipulation entered in the Maine Public Utilities Commission (PUC) proceedings required that CMP transfer the NECEC to another entity (NECEC LLC) that is not a subsidiary of CMP and, therefore, CMP no longer had TRI in the project.

The Board finds that the requirement in the Stipulation, dated February 21, 2019 (admitted into evidence by ruling of the Board Chair dated February 12, 2021), for future transfer of part of the project to NECEC LLC did not remove TRI from CMP as the applicant. The Commissioner properly evaluated CMP's TRI because CMP was not required to transfer the property or property rights involved until at a point after the permit decision was made. Thus, CMP's TRI was not affected at the time the application was being processed. The issue of NECEC LLC's TRI would not arise until a transfer application was submitted to the Department pursuant to Chapter 2, § 21(C)(1) on September 25, 2020. (Appeal of the Transfer Order, including a claim associated with TRI, is addressed in Section 15, below.)

In sum, based on the findings and evidence described above, the Board finds there is sufficient evidence, including the 2014 Lease, in the administrative record to support the Commissioner's finding that CMP demonstrated sufficient TRI throughout the application processing period.

8. ORIGINAL JURISDICTION

A. Arguments of Parties

As one of the bases of their appeals, NRCM and West Forks argue that the Department Order should be vacated because the Board was required to exercise original jurisdiction over the license applications and make the decision on the applications in the first instance. NRCM contends that the Commissioner lacked authority to review the project because the project meets the criteria for "a project of statewide significance" in 38 M.R.S. § 341-D (2) and Chapter 2, § 17(C), and therefore the Board should have decided the applications. NRCM points to the statute language, in 38 M.R.S. § 341-D(2), stating that the Board "shall decide each application for approval of permits and licenses that in its judgment represents a project of statewide significance." According to NRCM, use of the word "shall" here means that only the Board has jurisdiction to review the applications for this project and argues that the statute does not provide the Board or Commissioner with discretion. NRCM also points to the language in 38 M.R.S. § 344(2-A) that provides "the [C]ommissioner shall decide as expeditiously as possible if an application meets 3 of the 4 criteria set forth in section 341-D, subsection 2 and shall request that the [B]oard assume jurisdiction of that application." NRCM contends that the NECEC project

meets all four standards for a "project of statewide significance" and that the Commissioner was required to refer the project to the Board.

West Forks, in its response to the appeals, argues that the Board should review whether the Commissioner should have requested that the Board assume original jurisdiction over the NECEC applications.

In their response to the appeals, the Licensees contend that NRCM waived its argument that the Board should have taken jurisdiction over the NECEC applications because NRCM did not raise this issue until more than two and a half years after the deadline in Chapter 2, § 17(A) for a person to request that the Board assume original jurisdiction. The Licensees assert that if the Board were to vacate the Department Order and take original jurisdiction at this time, that would result in significant prejudice to the Licensees and other parties who participated in the permit proceedings. Further, the Licensees assert that NRCM explicitly requested that the Commissioner hold a hearing on the applications, in a Petition for a Public Hearing dated November 2, 2017. The Licensees argue that 38 M.R.S. § 341-D(2) "does not require the Board to make determinations that every project is or is not of statewide significance, nor does it establish that the Board is the only entity authorized to consider the permit applications, as NRCM claims." The Licensees argue that the Board is required to assume jurisdiction in only two instances, neither of which occurred here: 1) when both the Commissioner and the applicant request Board jurisdiction, or 2) if the Board makes a finding that at least three of the four criteria are met following referral to the Board with the recommendation of the Commissioner or at the request of an interested person. Otherwise, the Licensees contend, "the Board need not assume jurisdiction over a project of statewide significance, though it may in its own discretion decide to exercise jurisdiction." Finally, they argue that the Board may not now assume jurisdiction over the applications because the project was not of statewide significance at the outset of the license proceeding and, in any event, the project still does not meet three of the four factors for original Board jurisdiction.

The Maine State Chamber of Commerce, the Lewiston-Auburn Metro Chamber of Commerce, and the City of Lewiston assert that the respective roles of the Commissioner and the Board is not actually a jurisdiction question but is a question of which arm of the Department had the authority to decide the applications. These intervenors also argue in their response to the appeals that the issue of whether the Board was required to decide these applications in the first instance has been waived by NRCM, due to the timing of raising the issue and NRCM's explicit request that the Commissioner hold the hearing. These intervenors note that the Superior Court found that this claim was waived.

B. Board Analysis and Findings

Upon review of the arguments made by the participants in these appeals, the applicable statute and the regulation, and the Court's remand decision, the Board finds that the original jurisdiction issue raised by NRCM is waived. Chapter 2, § 17(A) provides that "[a]ny person may request that the Board assume jurisdiction over an application by submitting the request to the Department in writing no later than 20 days after the application is accepted as complete for processing." The record reflects that no such request was made during that 20-day period.

Similarly, no party ever raised the issue in the two and a half years the applications were pending. NRCM and West Forks did not raise the jurisdiction issue until after the Commissioner issued the decision. The Superior Court, in its decision on a request by NRCM for a stay of the permit, found that due to the failure to request Board jurisdiction during the required 20-day period after the applications were filed, or at any time during the Commissioner's processing of the applications, this issue is waived, and that it would be prejudicial to allow it to be raised at this time.[6]

Even if the issue was not waived, in a proceeding where neither the Commissioner nor any party requests the Board to take jurisdiction, the Board has discretion as to whether to assume jurisdiction: it is not required to do so. The applicable statute provides that "[e]xcept as otherwise provided in this subsection, the [B]oard shall decide each application for approval of permits and licenses that in its judgment represents a project of statewide significance" but it further states "[t]he [B]oard may vote to assume jurisdiction of an application if it finds that at least 3 of the 4 criteria of this subsection have been met." 38 M.R.S. § 341-D(2). The Board interprets these sections of the statute together, to mean that, when a matter has not been referred to it, the Board may of its own accord choose to consider whether to take jurisdiction over an application, but it is not mandatory. Chapter 2, § 17(B) also interprets the statute to give the Board discretion when no request or referral is made, saying: "The Board may assume jurisdiction over any application on its own initiative if it finds that at least 3 of the 4 criteria in section 17(C) are met." Neither the statute nor the rule requires the Board to consider the issue of jurisdiction in the absence of a request or a referral. The Board's authority is discretionary, and the Board never exercised its discretion to consider taking jurisdiction of the NECEC applications and never determined whether the project met at least three of the four criteria for a project of statewide significance. Given that the Board never decided to take original jurisdiction, the Board finds that the Commissioner had authority to decide the applications.

Finally, NRCM, as part of its argument for the Board to vacate the Commissioner's decision and take original jurisdiction, seeks a *de novo* review by the Board. The Board notes that in an appeal, "[t]he [B]oard is not bound by the [C]ommissioner's findings of fact or conclusions of law but may adopt, modify or reverse findings of fact or conclusions of law established by the [C]ommissioner." 38 M.R.S. § 341-D(4). The Board's review on an appeal, therefore, is a *de novo* review.

9. SCENIC CHARACTER

The Site Law, 38 M.R.S. § 484(3), and the 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. 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.

[6] *NextEra Energy Resources, LLC v. Maine DEP*, KEN-AP-20-27 & *West Forks v. Maine, DEP*, SOM-AP-20-04 (Jan. 8, 2021, Murphy, J.).

In the Order, the Department determined the NECEC project would satisfy the visual impact standards in both Site Law and NRPA, provided CMP took specified steps to mitigate the scenic impacts, including through planting and maintenance of roadside buffers, using shorter poles adjacent to Moxie Pond, maintaining a minimum vegetation height of 35 feet in one area adjacent to Moxie Stream, using non-specular conductors within several viewsheds, and tapering the vegetation along the corridor within the viewshed of Coburn Mountain and Rock Pond. Tapering is 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. The wire zone is the 54-foot-wide area that runs along the center of the 150-wide corridor and includes the 24-foot-wide area that runs along the center of the corridor (under and between the conductors), plus 15 feet on the outside of each conductor. (15 ft. + 24 ft. + 15 ft. = 54 ft.) In the wire zone, scrub-shrub vegetation with a height of up to 10 feet will be allowed to regenerate after initial clearing for construction. Outside the wire zone vegetation height will increase as the distance from the wire zone increases. In the first 16 feet (the first taper) vegetation up to 15 feet tall will be maintained; in the second 16 feet (the second taper) vegetation up to 25 feet will be retained; and in the third 16 feet (the third taper) vegetation up to 35 feet will be retained. The wire zone, plus the three tapers on each side of the corridor, cover the entire, 150-foot width of the corridor. (Tapering is more fully described in Department Order, Appendix C.)

NRCM did not appeal the Department's conclusions with respect to the visual impact of the project. West Forks did appeal this portion of the Order, focusing solely on the required tapering of vegetation near Coburn Mountain and Rock Pond, arguing that the tapering requirement "is not supported by the evidence and does not comply with Site Law." (West Forks Appeal at 12.) They contend that tapering will result in an increase in pole heights and request that the Board require a new, full visual impact assessment (VIA) in leaf-off conditions in order to evaluate tapering as a means of mitigating the visual impact of the project.

Although West Forks does not allege that the Department erred in its application of the NRPA visual impact standards, because of the close relationship between the visual impact standards within the Site Law and NRPA, the Board addresses West Forks' claim that tapering is unsupported by the record as a means for mitigating visual impacts when the project is viewed from Coburn Mountain and Rock Pond under both statutes.

A. Board Analysis and Findings

(1) Regulatory Framework

The 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. The 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 the proposed project may fail to satisfy the review criteria. This is reflected in the corresponding NRPA and Site Law rules, both of

which specify that an applicant's burden is to demonstrate that there would be no "unreasonable adverse" impacts or effects and the Board'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 Board is guided in part by Chapter 315, § 9. This section provides:

> The Department's determination of impact is based on the following visual elements of the landscape:
>
> A. Landscape compatibility, which is a function of the sub-elements of color, form, line, and texture. Compatibility is determined by whether the proposed activity differs significantly from its existing surroundings and the context from which they are viewed such that it becomes an unreasonable adverse impact on the visual quality of a protected natural resource as viewed from a scenic resource.
>
> B. Scale contrast, which is determined by the size and scope of the proposed activity given its specific location within the viewshed of a scenic resource.
>
> 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.

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

> (1) The design of the proposed development takes into account the scenic character of the surrounding area.

(2) 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.

(3) Structures will be designed and landscaped to minimize their visual impact on the surrounding area.

. . . .

(4) The plans for the proposed development provide for the preservation of existing elements of the development site which contribute to the maintenance of scenic character.

Chapter 375, § 14(B).

The Site Law rules do not contain a section similar to NRPA's Chapter 315, § 9, which identifies more specific elements to be considered that guide the Board in determining whether a scenic impact is unreasonable. Finding the guiding concepts in Chapter 315, § 9 instructive to the Board's charge under Site Law in evaluating visual impacts, the Board considers the elements for evaluating visual impacts set out in Chapter 315, § 9, as well as the more general language of Chapter 375, § 14(B), when evaluating the reasonableness of impacts to the scenic character of the surrounding area under Site Law.

As noted above, while similar, NRPA and Site Law are not identical. The Board'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 Board's review of visual impacts under Site Law is broader. Under Site Law, the Department must consider whether an 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. For the purpose of this Order, where the Board 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) Evaluation of Scenic Impacts

In evaluating the scenic impacts of the proposed project under the Site Law, 38 M.R.S. § 484(3), and NRPA, 38 M.R.S. § 480-D(1), the Board considered all relevant evidence in the record, including the application and supplementary filings by CMP, the 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 Board first reviews the evidence and Department findings with regard to the two specific viewsheds named in West Forks' appeal, Coburn Mountain and Rock Pond.

a. Coburn Mountain

The project corridor and numerous structures will be visible from the summit of Coburn Mountain, which is accessible via a multi-use trail maintained by the Bureau of Parks and Lands. The public comments and testimony received by the Department during its review of the application demonstrate that Coburn Mountain is a popular destination for snowmobilers. The summit area is not completely undeveloped, as a small building, some communication infrastructure, and a solar array are located and visible on 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, CMP proposed tapering the vegetation in the corridor within the viewshed of Coburn Mountain and using non-specular conductors in this same area. To show the effect of tapering, CMP submitted photosimulations of the project from the top of Coburn Mountain, both with and without this form of vegetation management, including during wintertime, leaf-off conditions.

The Board has reviewed the snow-cover, leaf-off photosimulations from the top of Coburn Mountain that depict the project, as initially proposed and without tapering, as well as the photosimulations that show the project with non-specular conductors and a tapered corridor. The most visible part of the project from the mountain is the cleared corridor, as opposed to the poles and conductors. The Board finds that tapering helps mitigate the visual impact of the project. Tapering softens the edge of the corridor and makes the corridor less visible overall. The addition of tapered vegetation reduces the spatial dominance of the project and improves its compatibility within the landscape. The tapered corridor will not be dominant and will be visible as one of a few, non-natural features of the landscape seen from the summit of Coburn Mountain along with, for example, an existing land management road.

The Board finds that tapering significantly reduces the visual impact on the view from Coburn Mountain and that tapered vegetation will minimize scenic impacts to an extent that they would not be unreasonable given the surroundings, and finds that the project will not have an unreasonable impact on the scenic uses or character of Coburn Mountain, provided the Licensees comply with the tapering and the use of non-specular conductor requirements in the Department Order.

b. Rock Pond

Rock Pond is a 124-acre pond with a boat launch, one seasonal camp, and approximately six campsites on the northern end of the pond. The pond is rated as a significant scenic resource by the Maine Wildlands Lake Assessment. Project structures and the corridor will 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.

At the request of the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Department required the several poles near Gold Brook to be taller to allow for full canopy vegetation within 250 feet of the brook. This will increase the visibility of those structures from Rock Pond. To minimize the visual impacts overall, CMP proposed to taper vegetation in this

portion of the corridor and to use non-specular conductors in the areas where they would be visible from Rock Pond. CMP prepared photosimulations depicting the views from Rock Pond with taller poles and tapered vegetation as part of the permitting process. These photosimulations did not include wintertime, leaf-off conditions due to limited recreational use of Rock Pond in the winter. CMP made this decision following discussions with Department staff in which it was noted that Rock Pond is closed to ice fishing and the ITS[7] snowmobile trail is not located on or near the pond.

A portion of the project that is particularly 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. CMP revised its original proposal to incorporate tapered vegetation along this section of the corridor, narrowing its width and softening its edge. CMP also revised its proposal to incorporate the use of non-specular conductors in this area where the project is visible from the pond. Both forms of mitigation are required as conditions of the Order. Up to six structures would be visible from the Pond, with three of these being taller to allow for full canopy vegetation at the Gold Brook crossing. From most viewpoints on the pond all of the visible poles would be seen against a forested backdrop due to the surrounding topography. Vegetation would screen visibility of the project from the campsites on the northwestern end of the pond. The Department staff, the Commissioner, an 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 Board reviewed the visual simulations of this portion of the project in the VIA, both with and without tapering, when viewed from Rock Pond, and considered other relevant record information. As noted in the Department Order, 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. The photosimulations show that tapering minimizes the visibility of the corridor from Rock Pond, making it much less prominent and improving compatibility with the landscape. The structures that would be visible, depending on an individual's vantage point, would be seen against a forested backdrop from most locations, reducing their visual prominence in the landscape. Based on the VIA and evidence concerning potential impacts to uses of Rock Pond, the Board finds the project will not have an unreasonable adverse effect on scenic uses or character of Rock Pond, provided the Licensees comply with the tapering and the use of non-specular conductor requirements in the Department Order.

c. Complete Record

Looking beyond Coburn Mountain and Rock Pond, West Forks argues that tapered vegetation as mitigation of visual impacts is not supported by evidence in record and asks for the record to be reopened to allow for submission of more information. West Forks states that "in requiring tapering, pole heights will be increased. At a minimum, a full VIA with narrowed corridor, tapered vegetation in full leaf-off conditions would begin to show how this approach might impact the scenic resources and should be required as additional evidence." (West Forks Appeal at 12.)

[7] Interconnected Trail System

The Board finds the premise of West Forks' argument is faulty. Tapering does not require the installation of taller poles.[8] Rather, tapering allows for the maximum amount of vegetation at the tallest height to be retained within the corridor without having to use taller poles. Where the corridor itself, as opposed to just the poles and conductors, is a visible project feature, tapering narrows the cleared portion of the corridor. As a result, tapering will reduce visual impacts, not increase them.

The Board finds that the benefit of tapering as a visual impact mitigation technique is evident from the evidence in the record, including the photosimulations. Where the Department Order required tapering in two locations specifically to minimize scenic impacts, Coburn Mountain and Rock Pond, the Board finds that the visual simulations of both locations show the scenic benefit of tapering. With respect to West Forks' contention that wintertime, leaf-off visual simulations should be required, the Board agrees that where scenic resources are actively used in the winter months and tapering is proposed in order to minimize visual impacts, visual simulations showing the views during the winter months are important. Such wintertime visual simulations aid the Board in its evaluation of scenic impacts. These visual simulations were prepared here. CMP provided wintertime, leaf-off visual simulations from the top of Coburn Mountain, a vantage point frequently visited by snowmobilers. The applicant reasonably did not prepare wintertime visual simulations for Rock Pond, which is closed to ice fishing and not located near the ITS trail network. Given that tapering does not require installation of taller poles, and that it significantly reduces visual impacts, the Board finds creation of additional visual simulations showing a tapered corridor is unnecessary. The record is fully developed to allow the evaluation of the scenic impacts of the project. West Forks' request to reopen the record for the purpose of submission of more information on tapering and scenic impacts is denied.

[8] The Department Order requires multiple types of vegetation management; they are discussed throughout the Order and collectively in Appendix C of the Department Order. In addition to tapering, the Department Order requires three other types of vegetation management along Segment 1: full canopy height vegetation, vegetation with a 35-foot minimum height, and deer travel corridors. Full canopy height vegetation requires the installation of taller poles (i.e., taller than the typical poles used along Segment 1); maintenance of vegetation with a 35-foot minimum height requires taller poles in some locations. Where these two forms of vegetation management are required, they are within locations designated as Wildlife Areas in the Department Order. (Department Order, Appendix C (identifying the location of Wildlife Areas).) Tapering is not required where full canopy height vegetation and vegetation with a minimum 35-foot height must be maintained. West Forks focuses solely on tapering and the impact on scenic character of this form vegetation management. West Forks does not present any arguments regarding the installation of taller poles in Wildlife Areas and the potential scenic impacts associated with the conditions requiring full canopy height vegetation or vegetation with a 35-foot minimum height in these areas. Any such argument is therefore waived. Nevertheless, whether taller poles would be needed to allow for the maintenance of taller vegetation within Wildlife Areas (e.g., full canopy height vegetation and vegetation with a 35-foot minimum height) was evaluated by the Commissioner, as was the potential visual impact. (See, e.g., Department Order at 41.) The Board notes that the record includes the VIA prepared by CMP, which includes visual simulations prepared in advance of the public hearing showing taller poles associated with full canopy vegetation at the Gold Brook crossing. Additionally, at the hearing, in response to questions from the Department staff, CMP agreed that vegetation at specified stream crossings could be maintained at taller heights and CMP submitted information in response that included necessary taller pole heights at some individual crossings. CMP also identified where taller poles would be needed in the vicinity of priority areas for habitat connectivity that were identified by The Nature Conservancy. These areas were incorporated, in part, into the Wildlife Areas designated in the Department Order and the analysis of scenic impacts in the Department Order reflects consideration of taller poles in Wildlife Areas. The Board finds that the Commissioner reasonably and appropriately considered the relationship between the required vegetation management and pole height when evaluating the impacts of the project. No additional record evidence is needed.

10. NATURAL RESOURCE IMPACTS

The Site Law, 38 M.R.S. § 484(3), requires applicants to demonstrate that a project will not adversely affect any natural resources. Chapter 375, § 15 of the Board's rules interprets this provision of the Site Law in part as protecting wildlife and fisheries by maintaining suitable and sufficient habitat, including travel lanes between areas of available habitat – particularly for species susceptible to disruption and interference of lifecycles by proposed alterations and activities. In addition, 38 M.R.S. § 487-A(4) requires the Board 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 applicants to demonstrate that a 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 Board in its determination of whether a project's impacts would be unreasonable. Each application for a NRPA permit that involves a wetland alteration or an alteration to a river, stream, or brook; Inland Waterfowl and Wading Bird Habitat (IWWH); a Significant Vernal Pool;[9] or Tidal Waterfowl and Wading Bird Habitat, must provide an analysis of alternatives, which is a part of the Board's analysis of whether a proposed project's environmental impacts are unreasonable.

With respect to the evaluation of natural resource impacts under the Site Law and NRPA, the appellants argue that the Licensees' alternative analysis was inadequate. Additionally, NRCM and West Forks argue that the wildlife and wildlife habitat impacts resulting from the project would be unreasonable. More specifically, NRCM states the impact of the project on brook trout and brook trout habitat would be unreasonable, and both NRCM and West Forks argue that habitat fragmentation caused by the project would be unreasonable.

A. Alternatives Analysis

The Board reviewed CMP's September 27, 2017 alternatives analysis for the proposed project, which was completed by Burns and McDonnell, along with the other evidence in the record and the testimony from the public hearing, including evidence pertaining to the undergrounding alternative.

(1) Evidence of Alternatives Considered by Licensees

CMP states that the purpose of the project is to deliver up to 1,200 MW of clean energy generation from Quebec to the New England control area via an HVDC transmission line. CMP evaluated the No-Action alternative but determined that it would not meet its project goals.

[9] As used in this Board 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 venal pool depression and that portion of the critical terrestrial habitat within 250 feet of the depression. See Ch. 335, § 9.

CMP provided evidence as follows describing its evaluation of five potential transmission corridor routes at the landscape scale as part of its initial analysis. The alternative evaluation process included a list of assessment criteria for priorities. The evaluation sought to avoid or minimize the following (in order of importance): conserved lands; undeveloped right-of-way; amount of clearing required; number of stream crossings; transmission line 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 CMP 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 previously held that would have enabled it to acquire much of that ROW have expired. Additionally, portions of the area are now subject to conservation easements. A new crossing of the Appalachian Trail (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 of the AT would be 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.

Along the Preferred Alternative Route, CMP examined two alternative locations and horizontal directional drilling (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 Region Conservation Easement.

The fifth alternative considered by CMP involved running the transmission line under the Upper Kennebec River using HDD technology. CMP 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 6(A), 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. CMP states that in siting the project on the Preferred Alternative, it chose a route that 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 written and oral hearing testimony. This includes the feasibility of locating the line underground, in general, as well as underground along the Spencer Road or Route 201. The hearing testimony and Board's consideration of the underground alternative is summarized below in the following subsections.

Finally, during the application review process CMP also proposed modifying the original preferred route with the Merrill Strip Alternative to address scenic impact concerns. 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, CMP and this landowner reached an agreement and CMP obtained an easement for approximately 20 acres of land to enable it to propose using the Merrill Strip Alternative as part of its Preferred Alternative. This strip is 1.0 mile long and 150 feet wide.

In addition to its landscape scale analysis of possible routes, CMP submitted evidence describing its site-specific means to minimize impacts. These included proposing to use 100-foot-tall, single, 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 measures CMP 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.

(2) Public Hearing Evidence and Comments on Alternatives Analysis

a. CMP Testimony and Evidence on Alternatives

In its application, supporting documents, and witnesses' pre-filed and oral testimony for the first segment of the public hearing, CMP provided evidence on its methods to avoid and minimize the impacts from the project. This evidence described the evaluation of the alternative routes described above, as well as the efforts involved in siting the line and the structures once a general location was chosen. On April 1, 2019, CMP's witnesses provided oral testimony on its alternatives analysis. The witnesses' written direct testimony for this first day of the hearing did not substantially address the feasibility of locating the transmission line, or sections of the line, such as all or part of 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 CMP on the option to bury the line (the underground alternative), CMP provided pre-filed rebuttal testimony on the issue, including from new witnesses. Following this pre-filed rebuttal testimony, discussion at the first day of the hearing, and further pre-filed sur-rebuttal and supplemental testimony, which was filed prior to the May 9, 2019 hearing, the underground alternative was a focus of the second segment of that hearing.

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. These CMP witnesses provided testimony concerning the constructability of an underground line, the feasibility of burying the line along the Preferred Alternative 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, meaning that for the two overhead conductors proposed, four underground cables would be needed. Bardwell testified that a spare underground cable also would be required, bringing the total number of cables to five. He explained that while other proposed projects with a similar voltage involved fewer underground cables, this was because these other projects did not have the same power transfer capacity. The power transfer capacity of the NECEC project required the additional cables. Bardwell provided an overview of the construction process, including trenching and other techniques for underground installation, and described the need to splice together cable sections approximately every 2,200 feet, and the necessary 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 Segment 1 underground in the Preferred Alternative corridor would result in a total project cost of $1.6 billion, adding approximately $640 million to the overall cost of the NECEC project, or roughly an increase of 67 percent. Tribbet also addressed other transmission line projects with undergrounding technology, noting that each involved project-specific consideration. 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 as of the date of his testimony.

CMP witness Kenneth Freye testified that at the time CMP was evaluating route alternatives it discussed options with the landowner of Spencer Road, Plum Creek Maine Timberlands, LLC. Plum Creek was opposed to having a transmission line along its road. Freye also testified that locating the line underground along Route 201 was not practicable for several reasons, principally because the Maine Department of Transportation would not allow the underground transmission line within the travel way of the road.[10] He testified that the remainder of the Department of Transportation right-of-way (to either side of the paved road) 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

Intervenor Group 1 witnesses 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, Intervenor Group 1 argued, the no action alternative is practicable. Friends of the Boundary Mountains also made this argument in its letter supporting NRCM's appeal.

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

Intervenor Group 8 witness Christopher Russo also testified concerning the undergrounding alternative. He testified 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.

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

[10] 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 Department of Transportation rule, 17-229 C.M.R. Ch. 210, § 10(5), Pt. D.

Intervenor 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 splicing and associated vaults, and the need for thermal sand. With regard to thermal sand Paquette 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 to prevent the cables from overheating, causing a fault.

c. Public Testimony and Comments on the Alternatives

Members of the public submitted written comments and testified at the hearing on CMP'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 that they believed the line should be buried under Spencer Road or Route 201. One person in favor of the project testified that undergrounding would be too costly and, therefore, is not a practicable alternative.

d. Department Staff Questions on Underground Alternative

During the sixth day of public hearings, Department staff stated that they had conducted their own research into placing the lines underground and had questions on this topic for the witnesses with expertise on the topic. Staff stated that some published reports seem to indicate that some HVDC lines could be placed in a trench one and half feet wide and four feet deep and asked the witnesses about that technique. When questioned on this alternative, Intervenor Group 3 witness Paquette and CMP witness Bardwell testified that due to the amount of power transfer capacity required for this project, that technique is not possible for the proposed project.

(3) Summary of Department Findings and Conclusion in the Order

The evaluation of the reasonableness of the natural resource impacts of the NECEC project must include a review of the evidence presented by CMP on alternatives and any other evidence of alternatives that is in the record. 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 in the assessment of the reasonableness of any impacts.

The Commissioner determined the basic methodology CMP used in its analysis of alternative routes was sound. CMP's evaluation of alternative routes began with evaluating alternatives at a landscape scale and used a list of factors to assist with comparison. The Commissioner found that the factors used by CMP at the site selection stage of the project served as reasonable proxies for likely environmental impacts, as well as the practicability of a project. For example, the Commissioner noted in the Department Order that the National Wetland Inventory data are not accurate enough to use at the permitting phase but are appropriate for a prospective

developer to use when selecting between alternative sites or routes and attempting to minimize wetland impacts. The Commissioner found that consideration of the location of conserved lands was reasonable and appropriate for several reasons. The Commissioner noted, conserved lands often are conserved because of their environmental value and are more likely to be areas used by the public for recreational purposes. Additionally, locating a corridor within conserved lands may not be legally possible depending on the nature of the conservation. The Commissioner found that the length of undeveloped right-of-way also was 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 was 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 CMP. In sum, the Commissioner found the factors considered in the alternative analysis were appropriate and sufficient in number and scope.

With respect to specific alternative routes, the Commissioner found in the Department Order that Alternative Route 1 was not a less 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 did not appear practicable given the easement areas it would have to cross, parcel count, and AT crossing rights that would be needed. The Commissioner found that Alternative Route 2 was slightly shorter than the Preferred Alternative and would involve considerably less new right-of-way, and that the identified resource impacts within Alternative Route 2 and the Preferred Alternative were comparable. However, the new AT crossing and challenge and cost of navigating through or around the Bigelow Preserve did not make Alternative Route 2 a practicable alternative. The Commissioner also found that neither the Brookfield Alternative nor the CMP Land Alternative was a less 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. The Commissioner determined that CMP appropriately modified its proposal during the course of the permitting process to reduce impacts by using HDD technology to locate the line under the Upper Kennebec River and shifting the location of the corridor in the vicinity of Beattie Pond to run along the Merrill Strip Alternative.

In the Department Order, the Commissioner found that within the corridor and project area for the Preferred Alternative, on the site-specific scale, CMP 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. In addition, the Commissioner found that CMP's special design accommodations proposed for individual resources in specific locations and proposed utilization of construction best management practices would minimize impacts to resources adjacent to the structures and roads being built. The Order notes the example in Greene (Segment 3), where CMP proposed 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, a rare plant occurrence in Maine (and a federally listed rare plant). The Order also points to minimization of impacts in Appleton Twp. and Johnson Mountain Twp. (both in Segment 1), where CMP proposed 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. (in Segment 1)

maintenance of 10- to 15-foot-tall spruce/fir within the corridor was proposed to protect Rusty Black Bird habitat. The Commissioner also found CMP had minimized impacts to other rare plant habitats.

With respect to undergrounding portions of Segment 1 in addition to the Upper Kennebec River crossing, the Commissioner found that consideration of the underground alternative was both a relevant and important component of an evaluation of the project. The Order notes that originally this alternative was not meaningfully addressed by CMP in its application materials, but as part of the application review and public hearing process, CMP subsequently submitted testimony and exhibits on the underground alternative in response to evidence submitted and arguments made by intervenors. Upon evaluating the evidence, the Commissioner found that typical underground construction would result in greater environmental impacts than the proposed overhead alternative. The Commissioner noted the considerable logistical challenges of underground construction and concluded that when the environmental impacts of undergrounding is considered along-side the logistical challenges, locating Segment 1 (or the entire project) underground within the corridor would not be a less environmentally damaging practicable alternative. The Commissioner also concluded that colocation of an underground transmission line along Route 201 or the Spencer Road would reduce some environmental impacts, but neither was practicable, in part because of the infeasibility of acquiring the legal right to run the transmission line in either location and the associated cost.

The Commissioner determined that the selected above ground alternative was the least environmental damaging practicable alternative and that no further project modification or conditions regarding the transmission line's location, character, width, or appearance, beyond what was required in the Department Order, were warranted under 38 M.R.S. § 487-A(4) or otherwise, to lessen the transmission line's impact.

(4) Appeal Issues Concerning Alternatives

a. Summary of Arguments Presented by Appellants

All three appellants challenge the sufficiency of CMP's alternatives analysis. NRCM and NextEra argue that in its application CMP did not address locating the transmission line underground and that the lack of consideration of this option in CMP's application requires denial of the project.

On the substance of the issue of undergrounding as an alternative, all three appellants argue that running the transmission line underground is a practical alternative, or at least a potential alternative that was not adequately explored by CMP. NRCM argues the alternatives analysis done by CMP does not meet the requirements of Chapters 310, 315, or 335 of the Department's Rules. NRCM contends that CMP "never looked at" alternatives along disturbed corridors such as the Spencer Road or Route 201 (NRCM appeal at 29), and that building the line underground would be financially feasible because the additional cost could be absorbed by CMP's contingency funds. NRCM notes that the Northern Pass route should be considered as an example of a feasible underground line as it was initially selected as the winning bid in the Massachusetts RFP Process.

NextEra's argument stems from the requirement in 38 M.R.S. § 487-A(4) and Chapter 310 of the Department Rules that interpret NRPA. It argues that the Department Order is based on insufficient evidence and inadequately addresses alternative locations of the line as required by the Site Law. NextEra argues the Department Order fails to adequately address alternatives in accordance with Site Law, Section 487-A(4). In their appeal, NextEra states that CMP only made conclusory assertions in their post hearing brief that the project met this standard and there is no evidence in the record to support it. West Forks argues that if the Commissioner had not considered cost, then undergrounding all or portions of Segment 1 becomes practicable. They contend that Maine ratepayers will not bear any cost of the project and therefore additional costs for undergrounding should not be considered. NextEra further argues that the alternatives analysis provided by CMP, and the Department Order's discussion of the alternatives, did not address the relative impacts of the underground alternatives to protected natural resources as required under NRPA.

West Forks contends the Commissioner improperly altered the project purpose and mis-applied the Chapter 310, § 3(R) definition of "practicable alternative" by including the consideration of cost in the evaluation. West Forks contends that given that the purpose of the project as stated by CMP includes the goal to provide power at the lowest cost to ratepayers and that, due to CMP's fixed cost bid, no additional costs of the project would be passed on to the ratepayers, the Commissioner inappropriately considered the cost of alternatives when evaluating whether an alternative was practicable.

b. The Licensees' Response

The Licensees, in their response to the appeals, state that CMP was not obliged to analyze alternatives "that are too remote, speculative, or impractical to pass the threshold test of reasonableness." (Licensees Response at 44.) They contend that it was obvious that undergrounding the Project would not be practicable and for that reason CMP did not initially include it as an alternative. They argue that ultimately the underground alternative was thoroughly considered during the licensing process. In terms of the cost and the practicability of undergrounding, the Licensees argue that had CMP included the cost of undergrounding the entirety of Segment 1 in its bid in response to the Massachusetts request for proposals, the project never would have been selected; the cost would have been too high and the purpose of the project defeated. The Licensees point to evidence in the record they contend supports their arguments that undergrounding any of Segment 1, beyond the HDD installation at the Kennebec River, is not practicable, and argue that the evidence demonstrates constructing the project overhead is the only practicable alternative.

c. Other Responses to the Appeals

Friends of the Boundary Mountains asserts, in its response in support of the appellants, that the Commissioner erred in concluding the no-build alternative was not a practicable alternative. In its response in support of the appellants, Friends of the Boundary Mountains raises the argument that the project purpose is to supply power to Massachusetts, that an already permitted project in

Vermont could serve that purpose, and that therefore, the NECEC project is unnecessary and not building the project is a practicable alternative.[11]

(5) Board Analysis, Findings, and Conclusions

Review of the project under both NRPA and the Site Law includes consideration of possible alternatives. Under NRPA, the Board's rules interpret the statute as requiring an analysis of whether there is a practicable alternative to a project that would be less damaging to the environment, an important factor in the Board's assessment of the reasonableness of the impacts of the project in light of the statutory standards in Section 480-D. Ch. 310, § 5(A); Ch. 335, § 3(A). "Practicable" is defined as: "Available and feasible considering cost, existing technology and logistics based on the overall purpose of the project." Ch. 310, § 3(R); Ch. 335, § 2(D).

Under the Site Law, with respect to transmission lines like the NECEC, consideration of alternatives is required in the statute, specifically 38 M.R.S. § 487-A(4). This section provides in relevant part:

> The [D]epartment shall receive evidence regarding the location, character and impact on the environment of the proposed transmission line or pipeline. In addition to finding that the [licensing criteria] of [the Site Law] have been met, the [D]epartment, in the case of the transmission line or pipeline, shall consider whether any proposed alternatives to the proposed location and character of the transmission line or pipeline may lessen its impact on the environment or the risks it would engender to the public health or safety, without unreasonably increasing its cost. The [D]epartment may approve or disapprove all or portions of the proposed transmission line or pipeline and shall make such orders regarding its location, character, width, and appearance as will lessen its impact on the environment, having regard for any increased costs to the applicant.

a. Underground Alternative

A primary focus of the appeals is on the underground alternative.[12] As explained in the Department Order and evident from review of the record, CMP did not address in its application the possibility of running the transmission line, either in its entirety or just Segment 1,

[11] FBM did not appeal the Department Order. Instead, it elected to participate in the present appeal through the filing of a response to the appeals filed. This issue raised by Friends of the Boundary Mountains was not raised in the appeals filed and a new issue may not be introduced in the form of a response. Therefore, it is unnecessary for the Board to address this issue. Nevertheless, the Board notes this issue was raised in the underlying permitting matter and addressed by the Commissioner, who determined it was inappropriate to evaluate a Vermont-approved project in that state as an alternative to the NECEC project in Maine because the Vermont project did not meet CMP's project needs. The Commissioner declined 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 Board concurs with the Commissioner's determination.

[12] The underground alternative generally refers to running Segment 1 or the entire transmission line underground, as well as possible alternative underground routes, principally along Route 201 or the Spencer Road. The underground alternative also includes alternating between underground and overhead construction, sometimes referred to as porpoising.

underground. CMP argues locating the transmission line underground is so obviously unviable that there was no reason to discuss this in its application. The record shows some transmission lines elsewhere in the world are run underground and a short portion of the Licensees' line, where it would cross the Kennebec River, is permitted to be underground, as well. Evaluation of whether running other portions of the project underground is practicable, along with consideration of the potential associated environmental impacts, are important components of the overall review of the project and evaluation of whether it meets the permitting standards set in NRPA and Site Law.

The Board finds that CMP should have included evidence pertaining to the possibility of an underground alternative in its original application as part of its alternatives analysis; however, the initial absence of such evidence is not grounds for denying the NRPA and Site Law applications. The statutes and rules governing the processing of applications provide that the acceptance of an application as complete for review is not a determination that the information submitted is sufficient and does not preclude the Department from requesting additional information during the processing of the application. During the course of the processing of most applications, after review by the Department staff or comments from sister agencies or interested persons, the Department requests additional evidence from the applicant. Here, after the addition of time for written submissions on the topic of undergrounding and the extra day of the hearing, the record contained considerable evidence on the topic, consistent with what is required in Chapters 310, § 5(A); Ch. 335, § 3(A); and Section 487-A(4) of Site Law.

The Board has reviewed the evidence on a range of alternatives, including those initially considered by CMP and discussed its initial application submission, as well as the evidence developed through the hearing process. Specific to the underground alternative, the record contains evidence from CMP, intervenors in opposition to the project, and an intervenor in support of the project, concerning the cost, construction, and general feasibility of locating the project underground, as well as information on the types of environmental impacts generally associated with underground construction. This information is sufficient to allow evaluation of the practicability of the underground alternative, consistent with NRPA and the Site Law. In sum, the Board finds the absence of discussion of an underground alternative in CMP's initial alternatives analysis is not a fatal deficiency. The record on this issue was sufficiently developed through the course of the review of the Site Law and NRPA applications.

Turning to its evaluation of the underground alternative, the Board considers the potential environmental impacts associated with underground construction and operation of the project, along with the logistics and associated costs, in comparison to the Preferred Alternative. The record contains evidence, including testimony from Bardwell and Paquette, regarding how a project like the NECEC would be built underground. In summary form, their testimony was as follows. To locate a transmission line underground, in most areas the most affordable and common construction technique would be direct burial. This involves laying sections of cable within an open trench. For the NECEC, because of its power transfer capacity, four cables, plus a spare for reliability, would be located in the trench. This is different than other transmission lines with underground components discussed at the hearing that would not need as many cables or as large a trench. For a project with the NECEC's power transfer capacity, 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. Paquette testified that depending on soil types a surface width opening of up to 23 feet could be required in some areas in order to meet worker safety standards. A work area approximately 75 feet wide would be needed during installation.

The trench would be opened to accommodate a length of cable, which typically would be delivered in segments up to 2,500 feet long. Segments 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 of the opening 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. 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 record evidence indicates that thermal sand would have to be imported to enable running the transmission line underground.

To facilitate construction and ongoing inspection and maintenance, permanent access to each splice vault would be required. Additionally, after installation of the underground transmission line, the 75-foot-wide work area that had been cleared during construction would be maintained. The 75-foot-wide cleared area would be allowed to regenerate, but only with scrub-shrub species, to keep root systems from larger trees out of the cables.

Bardwell also testified about trenchless methods of underground transmission line construction: horizontal directional drilling, microtunneling, and pipe-jacking. Along with explaining the basics of these techniques he noted that HDD may be used for underground crossings between 4,000 and 7,000 feet, microtunneling allows for underground crossings up to 1,000 feet with no minimum distance, and pipe-jacking typically is limited to distances of 250 to 500 feet. Where a transmission line transitions from overhead to underground, and vice-versa, a termination station is required to make this connection. CMP described these stations in its application materials – they are required at both ends of the HDD crossing of the Upper Kennebec River – as did Bardwell in his testimony. A termination station measures 135 feet by 135 feet, is fenced in, and finished with a crushed stone surface typical of CMP substation yards. These stations include electrical equipment and associated foundations. Structure height within these stations would range from 95 to 170 feet depending on pole or transmission structure height in that area. Permanent access to each termination station would have to be maintained.

Based on the evidence outlined above, including the impacts of the construction, the width of the cleared area which must remain as scrub-shrub, and the additional structures needed, the Board finds that typical underground construction for a project with the power transfer capacity of the NECEC, which would be accomplished by direct burial, would result in a greater environmental impact than the proposed overhead alternative. In order to install cables underground in Segment 1, the cables would need to be buried under the streams, wetlands, vernal pools, and other natural

resources. While some impacts from trenching might be temporary, such as trenching through a wetland, this 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. For example, construction access along the entire length of the corridor would be needed to lay the cables within the trench. With overhead construction, access to pole locations can be designed to avoid natural resources, steep slopes, and highly erodible soils. Furthermore, with the underground alternative, after construction the original 75-foot-wide work area would remain cleared and managed as scrub-shrub habitat. This is wider than the 54-foot wire zone area cleared and maintained as scrub-shrub within a tapered corridor with an overhead line and comparable to a tapered corridor to the extent vegetation in the first taper, which grows up to 15 feet in height, is more scrub-shrub in nature than forested. A significant difference between a cleared corridor with an underground line and the Preferred Alternative as permitted in the Department Order is that taller vegetation across the width of the corridor, as required within Wildlife Areas,[13] would not be an option with maintenance of a 75-foot cleared area, maintained as scrub-shrub, over a buried transmission line. The Board finds that a corridor associated with the underground alternative would be more of a fragmenting feature, due to the extent and maintenance of cleared and scrub-shrub areas and permanent access, than the overhead alternative permitted in the Department Order.

The Board also finds the logistical challenges, a factor in the practicability analysis, of constructing the transmission line underground greater than overhead construction. The logistical challenges of underground construction of the NECEC would include: the need for splicing boxes approximately every 2,200 feet, the need for permanent access roads to these splicing boxes, hauling in thermal sand, additional truck trips to carry the heavy spools of underground cable, hauling out or otherwise disposing of material that cannot be backfilled, and the infrastructure upgrades needed to the road network.

Using trenchless technology could eliminate some of the impacts associated with direct burial, but would not eliminate the need for splicing the line and maintenance of permanent access to the transmission line splice boxes, and a 75-foot-wide cleared corridor maintained as scrub-shrub. To the extent trenchless installation could be used to cross under specific resources and then transition to overhead construction, the Board notes that termination stations would be needed on each end of the transition. There would be significant impacts associated with trenchless installation, as well as many of the same logistical challenges.

The cost of the underground alternative is another factor the Board must consider when evaluating the practicability. The definition of practicable in Chapter 310, § 3(R) requires the consideration of whether an alternative is "available and feasible considering cost, existing technology and logistics based on the purpose of the project." Notwithstanding the language in rule, West Forks contends cost is not a relevant consideration in this case. This contention is based on the following. West Forks points to CMP's statement of the project's purpose: "to deliver up to 1,200 MW of Clean Energy Generation from Quebec to the New England Control Area via a High Voltage Direct Current (HVDC) transmission line, at the lowest cost to ratepayers." West Forks then notes that CMP submitted a fixed cost bid to Massachusetts for the

[13] Wildlife Areas are discussed in Section 10(B) below.

project and any changes to the project cost after Massachusetts selected CMP's bid will be absorbed by the Licensees and not by ratepayers. Thus, West Forks argues, any added cost is acceptable and consistent with the project purpose because ratepayers will not pay. West Forks contends the Commissioner impermissibly excluded the clause – "at the lowest cost to ratepayers" – when describing the project purpose and erred in considering costs when evaluating the practicability of the underground alternative.

The Board finds West Forks' argument unpersuasive. The Commissioner did not act improperly when describing the project purpose in the Department Order without including the final clause, "at the lowest cost to ratepayers." While an applicant must explain the purpose of its project and it is important for the Department to recognize this stated purpose, neither the Commissioner nor Board has to accept an applicant's statement of project purpose verbatim. For example, a project purpose cannot be tailored by the applicant to make any cost increase impracticable or by an individual opposed to a project to preclude the consideration of cost to an applicant altogether. The NRPA rules underscore that cost is among the relevant considerations when evaluating the practicability of alternatives. West Forks' argument, which hinges on a reading of the statement of purpose as precluding consideration of the cost of alternatives to the applicant, is clearly at odds with rule.

With respect to the cost of undergrounding, Bardwell and Tribbet provided uncontradicted evidence that locating Segment 1 underground using direct installation would add approximately $640 million to the overall project cost, a roughly 67 percent increase. They further testified that trenchless installation technology is two to 10 times more expensive than trenching. In light of these costs and the logistical challenges of underground construction, along with the environmental impacts associated with running a line like the NECEC underground, the Board finds locating Segment 1 of the project (or the entire project) underground is not a practicable alternative to the Preferred Alternative that would be less damaging to the environment.

Appellants suggest running less than all of Segment underground also could be a viable alternative, for example, using trenchless technology to avoid specific resources and then transitioning to overhead construction. This is what is required in the Department Order at the crossing of the Upper Kennebec River, with the Commissioner making clear in the Order that the visual impact of an overhead crossing in this location likely could not have been approved. Following thorough environmental review of the project, with particular scrutiny on Segment 1, neither the Commissioner previously, nor the Board now, has identified another specific resource where transitioning to underground construction would be a practicable alternative less damaging to the environment. Underground construction, even using trenchless HDD, involves corridor clearing, permanent access, and termination stations to transition to and from overhead lines. Environmental impacts, such habitat fragmentation, are not eliminated and costs increase. In sum, the Board finds the underground alternative along all or parts of Segment 1, other than the Upper Kennebec River crossing, is not a practicable alternative less damaging to the environment.

b. Alternative Routes and Alternative Design Within Segment 1

The appellants also argue that alternative routes – specifically along Route 201 or the Spencer Road – were not adequately explored and could be practicable alternatives. The Board, however, finds the record supports the opposite conclusion. With respect to the Spencer Road alternative, CMP witness Freye testified that CMP discussed the possibility of locating the transmission line there with the owner of much of the Spencer Road and surrounding timberland. The landowner did not want the transmission line to run along or even near the Spencer Road where possible, in order to maintain flexibility to relocate the road, construct new log landing areas, open new gravel pits and access abutting land without potential interference from a transmission line. Although CMP was able to acquire timberland property for the corridor from this landowner, the landowner was not interested in conveying rights to CMP for locating the NECEC along the Spencer Road. This landowner eventually conveyed its lands to a new corporation, but that occurred after CMP had acquired rights for the Preferred Route corridor. Given the owner of the Spencer Road was not willing to convey rights to construct the project along the Spencer Road, the Board finds running the transmission line along that private road, whether underground or overhead, was not a practicable alternative.

With respect to running the transmission line underground along Route 201, witnesses for CMP testified about the logistical challenges of underground construction within the right of way for a public road. This included testimony about challenges of constructing a linear transmission project, that is built in a series of straight lines or tangents, along a road that curves. Beyond concerns about logistics, Bardwell and Freye testified that the existing Route 201 right of way was not wide enough to accommodate running the transmission line underground without requiring opening of the travel lanes to accommodate the splice boxes. Evidence in the record indicates that this is prohibited by Maine Department of Transportation rules. Freye noted that acquiring land adjacent to Route 201 to enable the line to be run underground across the front of the properties of many individual property owners would involve negotiations with each of those property owners and would be extremely difficult. The Board agrees with this assessment regarding the challenge of acquiring property along Route 201. Based on this, combined with the restrictions on construction within the travel lanes and logistics of building a transmission along a public road, the Board finds running the project underground along Route 201 is not a practicable alternative.

With respect to running the transmission line overhead along Route 201, the roughly 42 feet of right of way on either side of the travel lanes is not wide enough to accommodate the project, acquisition of additional land along this road likely would be extremely difficult to negotiate, and placing the line along the portion of Route 201 that is a scenic byway would increase scenic impacts of the project. The record contains evidence from Intervenor Group 1 about the scenic value and public use of the scenic byway. For these reasons the Board finds running the project overhead along Route 201 is not a practicable alternative to the Preferred Route.

Finally, with respect to alternative designs within Segment 1, the Board notes considerable efforts were made by CMP in designing the project to avoid impacts, for example, through pole location, location of access ways, construction timing, use of erosion control best management practices, and the use of third-party inspectors. The requirements of the Department Order further minimize impacts through design requirements. Notably, concerns about impacts to threatened or endangered species, significant vernal pools, rare plant communities, or wetlands

are not among those presented on appeal. The Board finds there are no practicable design alternatives that would be less damaging to the environment than the design approved in the Department Order.

c. Consideration of Alternatives Pursuant to Section 487-A(4) of the Site Law

NextEra argues that the Department Order reflects that the Commissioner failed to properly evaluate alternatives under Section 487-A(4) of Site Law, a provision specifically focused on transmission lines. This section requires the Department "to receive evidence regarding the location, character and impact on the environment of the proposed transmission line" and establishes that the Department "shall consider whether any proposed alternatives to the proposed location and character of the transmission line . . . may lessen its impact on the environment or risks it would engender to the public health or safety, without unreasonable in increasing cost." Finally, it authorizes the Department to approve or disapprove all or part of a proposed transmission line and to "make such orders regarding its location, character, width and appearances as will lessen its impact on the environment, having regard for any increased costs to the applicant."

With regard to the requirement to receive evidence on the location, character, and environmental impacts of a proposed transmission line, this clearly was done through multiple days of public hearing, written and oral testimony, and other agency and public comments received over many months. This Site Law provision also requires the consideration of "any proposed alternatives." As discussed above, CMP prepared an alternative analysis and through the course of this process other alternatives were proposed by parties to the process and members of the public. The underground alternative and the possibility of locating the project along the Spencer Road or Route 201 are examples of other proposed alternative that received considerable attention. Specific questions were posed by the Department about these alternatives, and they were addressed through the hearing process.

NextEra argues Section 487-A(4) was not satisfied because alternative routes to Segments 4 and 5 were not evaluated. This argument was not raised during the application review process and it is therefore waived. However, the Board notes that both Segment 4 and Segment 5 are located within existing corridors and will not involve any additional clearing. Co-location of a new or upgraded transmission line in a way that avoids new clearing is generally considered to be the environmental ideal.

Finally, Section 487-A(4) authorizes the Department as part of any final order to address the location, character, width, and appearance of a proposed transmission line and to lessen the project's impacts. In the Department Order the Commissioner did this through a range of conditions, including through vegetation management requirements that apply to Segment 1 and mitigate both wildlife and visual impacts.

The Board finds the Department Order satisfies Section 487-A(4) of Site Law. Further, with the benefit of the full record developed by the Commissioner through the licensing process, including the discussion of alternatives initially provided by CMP in its application filing and

those later proposed and evaluated through the hearing process, the Board finds no further project modification or conditions regarding the transmission's line's location, character, width, or appearance, beyond what is required in the modifications imposed by this order, are warranted under Section 487-A(4) to lessen the transmission line's impact on the environment or risk to public health or safety.

B. Impacts to Wildlife, Fisheries, and Other Natural Resources

Appellants NRCM and West Forks argue that the natural resource impacts of the project as approved are unreasonable, specifically the impacts to brook trout and brook trout habitat and, more broadly, the impact of habitat fragmentation. The evolution of CMP's original proposal through the application process and the imposition of conditions by the Department Order are informative in this analysis, and the Board outlines aspects of that process in summary form here. The hearing testimony and written comments received on the wildlife and wildlife habitat issues are also summarized. This parallels the summary provided in the Department Order.

(1) Department Review and Agency Review Comments

After an initial review of the application for impacts to wildlife, fisheries, and other natural resources, Department staff requested from CMP more information and further proposed protection for certain habitats. On December 11, 2017, Department staff stated in a letter to CMP that the Department had concerns about the proposed project's impacts to brook trout habit and requested additional mitigation.

MDIFW reviewed the application in its role as a commenting sister agency and similarly requested additional information and further protections. MDIFW provided comments on the proposed project's 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 on the threatened or endangered species list. MDIFW also expressed concern that the 25-foot-wide vegetative buffers CMP had proposed for streams crossed by the project were too narrow, particularly for streams in Segment 1 and other coldwater fisheries streams.

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

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

- Ten wildlife travel corridors in Upper Kennebec River DWA. Eight of these travel corridors would be created by selectively cutting the NECEC corridor in these areas to promote softwood growth necessary to provide winter habitat for deer (Department Order, 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, CMP modified its proposal in several ways. CMP agreed to incorporate into its proposal 100-foot riparian filter areas around all perennial streams in Segment 1 and all coldwater fisheries streams in the other segments. Within these filter areas, instead of removing all vegetation at ground height during construction, only vegetation over 10 feet in height is cut at ground level and only if it is within the 54-foot-wide area centered under the two conductors referred to as the wire zone. Within riparian filter areas but outside of the wire zone, noncapable species (i.e., those species not capable of growing tall enough to encroach into the conductor safety zone) may exceed 10 feet in height. Further, vegetation removal within riparian filter areas is accomplished by hand tools or reach-in techniques in order to preserve non-capable vegetation and vegetation under 10 feet to the greatest extent practicable. (Department Order, Appendix C describes these filter areas, referred to as buffers[14] by the Licensees; Department Order, Appendix E identifies waterbodies crossed by the project).

CMP also agreed to incorporate into is proposal compensation for impacts to coldwater fisheries in the form of:

- Land preservation (Grand Falls Tract, Basin Tract, and Lower Enchanted Tract);
- Funding to improve fish passage by providing $200,000 for replacement of poorly functioning or improperly sized culverts; and
- Providing $180,000 for compensation for the conversion of forested riparian habitat.

(2) Licensees Testimony and Evidence on Impacts

In its application and its hearing testimony, CMP and its witnesses described the methods used to locate and design the project in the least environmentally damaging manner. CMP'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 already is 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. CMP's witnesses 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. During the public hearing process CMP also committed to not using herbicides within Segment

[14] The Department Order uses the term "riparian filter areas," as opposed to the term "buffers" used by CMP, in recognition that some vegetation within these areas will be cut and that the primary function of these areas will be to filter sediments and pollutants from the runoff entering streams.

1; this was stated by CMP witness Gerry Mirabile in his pre-filed supplemental testimony and reaffirmed orally at the hearing on May 9th.

CMP's witnesses also provided testimony, in response to questions from the Department, on the possibility of tapering the vegetation in the corridor in additional areas along Segment 1 beyond that proposed or allowing for taller vegetation in the corridor through the use of taller poles. Mark Goodwin testified that the Licensees did not believe additional tapering or taller poles/vegetation were necessary, but of those two mitigation measures, he expressed CMP's preference for tapering.

(3) Intervenor Evidence on Impacts

Several witnesses for intervenor groups in opposition testified on the issue of impacts of the project on wildlife and fisheries. Intervenor Group 1 witness Janet S. McMahon; Intervenor Group 2 witnesses, Chris Russell, Greg Caruso, and Roger Merchant; and Intervenor Group 4 witnesses Dr. David Publicover, Dr. Aram Calhoun, Ronald Joseph, Todd Towle, and Jeffrey Reardon, testified that the project as proposed would have an adverse impact on wildlife and fisheries. Witnesses McMahon, Merchant, Publicover, Calhoun, and Joseph testified on the impacts the project would have due to forest fragmentation. Witnesses Russell, Caruso, Towle, and Reardon 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.[15] They stated that even though the forest may be somewhat fragmented due to logging practices, these cut areas are temporary in nature, and the transmission corridor would represent a permanent fragmenting feature in the landscape. Publicover also testified that the fragmentation of the forest would be permanent, and he asserted that the western Maine mountains region has global importance in terms of ecological diversity.

Reardon 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 streams crossed by a 150-foot-wide, cleared corridor without taller trees or a full canopy would not have the 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.

Ronald Joseph, as part of Intervenor Group 4, testified concerning the impacts to deer wintering areas and witness Calhoun testified that the project would adversely impact vernal pools and in particular pools that are in proximity to one another (referred to as poolscapes). (The impacts to deer wintering areas and vernal pools are not a focus of the appeals.)

[15] 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.

Intervenor Group 6, a neutral intervenor group, provided testimony concerning forest fragmentation from Dr. Malcolm Hunter, Jr., Rob Wood, Andy Cutko, Bryan Emerson, and Dr. Erin Simons-Legaard. Hunter testified on the types of impacts associated with fragmentation, including habitat loss and alteration, such as increased edge and reduced interior, and the potential long-term consequences of fragmentation. He asserted: "The proposed mitigation and compensation does not adequately address the cumulative impacts to the full array of Maine's wildlife." Group 6 witnesses Wood, Cutko, and Emerson jointly testified that the adverse effect of the proposed corridor would be greater than traditional sustainable forestry. They suggested in their testimony methods to minimize the forest fragmentation impacts of the project. They submitted as an exhibit 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 marten. 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 Licensees. Finally, Simons-Legaard testified that the proposed corridor would have significant adverse impacts on pine marten and other species; she also testified on the value of mitigation alternatives, including tapering, taller vegetation, and conservation.

(4) Public Testimony and Written 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, as well as impacts to the public's many uses of those 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. Other members of the public commented that the fragmentation impacts were also unreasonable. 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.

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 environmental benefits with respect to a reduction in greenhouse gas emissions, outweigh the impacts; therefore, they argued the Department should find that the impacts on natural resources would be reasonable.

(5) Summary of Department Findings and Conclusion in the Order with Respect to Wildlife and Fisheries

In the Department Order, the Commissioner specifically evaluated the potential habitat fragmentation caused by the corridor, as well as the potential impacts of the project on brook

trout habitat and brook trout and concluded that the project would not have unreasonable natural resource impacts. The Commissioner's determination that the project satisfies the permitting standards under both Site Law and NRPA was premised in part on the placement of numerous conditions designed to be protective of fisheries, wildlife and wildlife habitat.

a. Wildlife Habitat and Habitat Fragmentation

With respect to habitat fragmentation, the Commissioner determined that although the western Maine area where much of the project would be located is not completely undeveloped and is subject to active timber management, a traditionally-styled transmission line corridor in the area where Segment 1 is located could contribute to habitat fragmentation and could have unreasonable adverse impacts on wildlife as a result of the effects on wildlife travel lanes and lifecycles and accessibility to suitable and sufficient habitat.

More specifically, the Commissioner found that as Segment 1 initially was originally proposed, CMP had not made adequate provision for the protection of wildlife. Through modifications CMP made to its proposal in response to feedback from the Department and comments from MDIFW, Intervenors and the public during the permitting process, these potential wildlife impacts were reduced. The Board notes the project improvements to which CMP committed to through written submissions filed with the Department during the permitting process, which included:

- 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.
- Maintaining tapered vegetation in the area visible from Coburn Mountain and another area visible from Rock Pond.
- Expanding the riparian filter areas from 25 feet to 100 feet on coldwater fisheries streams, and on all other streams to 75 feet.

The Commissioner found that while these measures were expected to reduce the impacts of the Segment 1 corridor, they were not – by themselves – sufficient reduction in the fragmenting of habitat. The Commissioner determined that to ensure adequate provision for the protection of wildlife, CMP must minimize and mitigate habitat impacts by tapering most of the Segment 1 corridor and maintaining taller vegetation across the width of the corridor in the rest of Segment 1 and, additionally, must compensate for remaining impacts through habitat conservation.

1. Tapering

The tapered corridor required in the Department Order 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, on both sides, taller vegetation is maintained. This taller vegetation increases from 15 to 35 feet in height in three steps (or tapers) as the distance from the wire zone towards the outside of the corridor increases. The Order requires the Licensees to

maintain tapered vegetation along the entire Segment 1 corridor, except for the areas where the Licensees must maintain full height canopy vegetation, vegetation with a minimum height of 35 feet, or taller vegetation managed for deer travel corridors. The Commissioner determined that tapering along Segment 1 would provide improved habitat and improved passage between areas of suitable habitat where they exist adjacent to the corridor, would avoid creation of the hard forest edge that testimony established is detrimental to certain species of wildlife, and help mitigate the edge effect. It would result in a narrower scrub-shrub opening and allow a greater opportunity for wildlife to cross the corridor and reduce the time/distance crossing wildlife would be out in the more open scrub-scrub habitat.

2. Taller Vegetation in Wildlife Areas

The Commissioner determined that while a tapered corridor helps minimize impacts to habitat and wildlife movement, tapering alone would not adequately provide for the protection of wildlife throughout Segment 1 of the corridor. Based on testimony from witnesses such as Publicover and Simons-Legaard, the Commissioner found that vegetation in the 30- to 40-foot height range was the minimum necessary to meet the preference of pine marten, an umbrella species, and that taller vegetation more generally aided wildlife movement.

Focusing on riparian areas and areas adjacent to conservation land, and informed by TNC witness testimony identifying nine areas where they suggested taller vegetation within the corridor would significantly benefit wildlife, the Commissioner identified 12 Wildlife Areas where taller vegetation within the corridor must be maintained. Within Wildlife Areas 1 through 5 and 7 through 10, a minimum vegetation height of 35 feet is required, and within Wildlife Area 4 where it crosses Gold Brook full canopy height vegetation must be maintained. In these Wildlife Areas, only areas necessary to access pole locations or install poles would be cleared during construction. These access roads and structure preparation and installation areas would be maintained as scrub-shrub habitat. In the remainder of the width of the corridor in these Wildlife Areas, only trees taller than 35 feet, or trees that may grow taller than 35 feet prior to the next scheduled maintenance would be removed. (See Department Order, Appendix C.)

Within Wildlife Areas 6 and 11, the Department Order requires that full canopy height vegetation must be maintained. Within Wildlife Area 12 vegetation must be managed to promote deer movement across the transmission line corridor during the winter months when snow depths have the potential to inhibit deer travel. This involves the maintenance of softwood trees, generally in the range of 25 to 35 feet in height. (See Department Order, Appendix C for further explanation of vegetation management, including full canopy height vegetation, vegetation with a 35-foot minimum height, deer travel corridors, and tapered vegetation.)

Together, the 12 Wildlife Areas along Segment 1 with full canopy height vegetation, vegetation with a 35-foot minimum height, and softwood vegetation managed for deer travel total approximately 14.08 linear miles along the 53.1-mile-long Segment 1 corridor. The Commissioner found these areas would 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 would exceed 400 feet in width and benefit multiple species that prefer interior forest habitats, including pine marten.

3. Conservation

While the Commissioner determined tapering and maintaining taller vegetation, as required in the Order, would help mitigate the impact of Segment 1 of the corridor on wildlife and wildlife habitat, the Commissioner also recognized that even with these measures this 53.1-mile section of corridor still would have a fragmenting effect on the landscape of this unique forested region, affecting wildlife. The Order notes, for example, that the center of the Segment 1 corridor would be maintained as scrub-shrub habitat and the edge effect and reduction in interior forest habitat impacts testified to by Hunter would remain, although taller vegetation would reduce the edge effect. Additionally, even within areas with taller vegetation, the Order notes that access ways would be required during construction and maintained as scrub-shrub habitat. Where the minimum vegetation height is 35 feet, some taller vegetation may need to be selectively cut it if would encroach into the conductor safety zone.

Because of the impacts to wildlife, even with on-site mitigation, the Commissioner found additional, off-site, mitigation in the form of land conservation was required to ensure the Licensees made adequate provision for the protection of wildlife in the region affected by the project.

The Department Order required that within 18 months of the date of the 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 Order requires that 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 in size unless the area is adjacent to existing conserved land or the Licensees 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 Licensees will ensure the availability of 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.

b. Coldwater Fisheries – Brook Trout and Brook Trout Habitat

- The Order reflects how the project evolved through the permit review regarding reduction of the impacts on brook trout and coldwater fisheries. During the process CMP committed to maintaining 100-foot riparian filter areas, as described above, and conserving the Grand Falls Tract, Basin Tract, and Lower Enchanted Tract, which together contain 12.02 miles of streams. These conserved tracts also contain frontage on the Dead River, an Outstanding River Segment.

As explained in the Order and noted above, where a 100-foot riparian filter area would be maintained along streams, capable species (vegetation capable of growing tall enough to reach into the conductor safety zone) would be removed using hand tools or reach-in techniques. No herbicides would be used within these riparian filter areas.[16] Inside the wire zone (the 54-foot-wide are centered under the conductors), all woody vegetation, whether capable or non-capable, would be removed down to ground level. Outside the wire zone non-capable species would be allowed to exceed ten feet in height and would be maintained in the same manner as in the other tapered areas.

In addition to the expanded riparian filter areas and conservation, the Order requires full canopy vegetation at Gold and Mountain Brooks and taller vegetation with a minimum height of 35 feet within nine Wildlife Areas, which include numerous coldwater stream crossings. Finally, the Order requires the Licensees to contribute $1,875,000, instead of the $200,000 proposed by CMP, for culvert replacements to improve fishery habitat in order to compensate for coldwater fisheries habitat impacts.

(6) Arguments on Appeal Concerning Impacts to Wildlife, Fisheries, and Other Natural Resources

With respect to the potential impact of the project on wildlife, fisheries, and other natural resources, appellants NRCM and West Forks focus on the impacts to brook trout and brook trout habitat, as well as on habitat fragmentation.

NRCM argues the project will cause unreasonable adverse impacts to brook trout habitat even with the mitigation and compensation required in the Order. It contends that significant cutting will occur in riparian filter areas in order to construct the project. NRCM states the expansion of the riparian filter areas (also referred to as buffers) from 25 feet to 100 feet wide for perennial streams in Segment 1 and coldwater fisheries streams in other segments will not result in sufficient overhead cover, large woody debris inputs, leaf fall, or insect inputs into the streams. It states that the vegetation management along the route will result in a change of vegetation type from intact forest to a less valuable 150-foot-wide swath of short, scrubby vegetation. NRCM argues that in two areas where full canopy height vegetation is required the primary purpose is to reduce the impacts to Roaring Brook mayfly, not to protect brook trout habitat. NRCM further states that the full height canopy requirement is insufficient because it only applies to three stream crossings and five tributaries to Gold Brook are not covered by this full canopy height

[16] Additionally, no herbicide use would be allowed anywhere in the Segment 1 corridor under the Department Order.

requirement. NRCM also notes that only 21 stream crossings are included in the Wildlife Areas with taller vegetation. NRCM argues that the requirement for vegetation to be a minimum of 35 feet tall in the Wildlife Areas will result in the vegetation being a maximum of 35 feet tall. And it contends that 35-foot-tall vegetation is not tall enough to provide shade or large woody debris into the streams that cross the corridor in these areas. NRCM argues that the benefits to brook trout habitat from tapering are unproven and not supported by evidence in the record.

In critiquing the required compensation, NRCM. makes two arguments. First, it argues that that the Grand Falls, Basin and Lower Enchanted tracts do not contain comparable brook trout habitat to the areas impacted by the project. It contends these tracts do not contain the cold, high-elevation streams that are highly productive. Second, NRCM argues that there is no nexus between the impacts from the project and the requirement in the Order that the Licensees provide $1,875,000 for culvert replacements. It also argues that many of the culvert replacements will be on private land management roads and will likely cost more than $50,000-$100,000, and that many private landowners will not be willing to utilize the funds because of associated restrictions on use of their property and the maintenance requirements.

In its appeal, NRCM also contends the habitat fragmentation caused by the project is unreasonable. It argues that tapering is a scenic mitigation measure and will not mitigate the adverse impact to wildlife habitat, especially for species that utilize mature forest. It states that tapering will not provide adequate connections between mature forest habitats. NRCM states, "reliance on tapering conditions to offset what the Department concedes are unreasonable fragmentation impacts is impermissible under NRPA and Site Law." (NRCM Appeal at 21.) It expresses concerns with the implementation of the tapering condition and the Department's ability to monitor and enforce this condition for the life of the project. NRCM argues that the maximum tree heights in the tapered areas and the Wildlife Areas will be 15, 25 and 35 feet in the corresponding locations, as opposed to this being the minimum height as specified in the Order. In the Wildlife Areas, NRCM contends that the stand of trees left will not meet the minimum requirements for species such as pine marten. It also states that there is no provision for long term monitoring. Finally, in terms of habitat impacts, NRCM argues the land conservation required by the Order does not adequately compensate for lost functions and values caused by the project.

In its appeal, West Forks argues the project will cause unreasonable environmental and ecological impacts due to forest fragmentation. They argue the Department did not adequately address the habitat fragmentation concerns raised by several witnesses and that the mitigation measures and compensation required in the order are still inadequate. West Forks contends that the Department disregarded clear testimony and evidence concerning the environmental impact of the project and that the conditions imposed by the Order will not alleviate the permanent negative impacts to wildlife and wildlife habitat.

(7) Licensees' Response

On March 12, 2021, the Licensees responded to NRCM's arguments concerning potential impacts to brook trout and brook trout habitat by stating that NRCM did not cite any evidence in the record that demonstrates the riparian filter areas are not adequate to protect brook trout

habitat. They also point to the fact that there are no direct impacts to brook trout habitat proposed, with the exception of the culvert replacements, which are a benefit to habitat and water quality. The Licensees also point to the various review comments prepared by both the Department staff and MDIFW and the changes to the design of the project that resulted from those comments, with MDIFW ultimately indicating all its concerns had been addressed.

(8) Board Analysis, Findings, and Conclusions

The Site Law, in 38 M.R.S. § 484(3), requires applicants to demonstrate that a project will not adversely affect natural resources. Chapter 375, § 15, 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, considering the susceptibility of certain species to disruption and interference of lifecycles by proposed alterations and activities.

NRPA, 38 M.R.S. § 480-D(3), requires applicants to demonstrate that the proposed project will not unreasonably harm: aquatic or adjacent upland habitat; travel corridors; freshwater, estuarine, or marine fisheries; or other aquatic life. NRPA and the pertinent regulations promulgated under it, Chapters 310 and 335, recognize the importance of rivers, streams, and brooks; wetlands; and Significant Wildlife Habitat, 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 result in unreasonable impacts to protected natural resources.

a. The Project Does Not Unreasonably Impact Brook Trout or Brook Trout Habitat

The project corridor crosses 471 rivers, streams, or brooks that contain brook trout habitat, 351 of which will have some clearing impacts, and five Outstanding River Segments. The evidence in the record establishes that Maine is one of the last places where native brook trout habitat is still intact and wild brook trout still thrive. Evidence in the record from Intervenors and members of the public demonstrates that this fishery and the related use of the resource by fishing guides, owners of sporting camps, and Maine residents and tourists are important uses 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. 38 M.R.S. § 480-D(3). Fisheries, aquatic habitat, and wildlife habitat are listed in Chapter 310, § 3(J) as among the functions to be considered. NRPA also protects recreational uses of protected natural resources, pursuant to 38 M.R.S. § 480-D(1). 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 Board under Site Law, 38 M.R.S. § 484(3), and Chapter 375, § 15. As a result, pursuant to NRPA and Site Law the Licensees must make adequate provision for the protection of fisheries and avoid, minimize, and compensate for impacts to fish habitat.

NRCM argues the Licensees have failed to do so, pointing to the impact on brook trout habitat associated with clearing the corridor, particularly in Segment 1. Forested riparian areas along rivers, streams, and brooks inhabited by brook trout provide several identified benefits. These areas filter sediment and pollutants, stabilize the bank, regulate water temperature by providing shade in the summer and insulation in the winter, attenuate peak flows and help maintain base flows, and provide input of woody debris and other organic matter. (See, e.g., J. Reardon Pre-filed Direct Testimony, Ex. 7 at 8.) These functions provided by vegetated riparian areas are recognized by MDIFW and reflected throughout their comments on the project. The Licensees acknowledge the importance of forested riparian areas on coldwater fisheries habitat, although their position is that the clearing of transmission line corridors have a limited effect on these riparian areas and the brook trout habitat in the adjacent rivers, streams, and brooks. In its Compensation Plan, for example, CMP refers to two studies in support of this position – neither of which, the Board observes, were conducted in Maine – in support of its position:

> [A] study by Gleason on the impacts of powerline rights-of-way ("ROW") on forest stream habitat found that despite the open canopy condition, water temperatures were slightly lower than in off-ROW areas and that none of the water quality parameters were significantly different between the on-ROW areas and off-ROW study areas. Gleason's study also found no correlation between percent canopy cover and mean percentage of fines and found no significant difference in the Benthic Index of Biotic Integrity scores between on-ROW and upstream areas. Similarly, a study conducted by Peterson on the effect of electric transmission ROWs on trout in forested headwater streams in upstate New York found that stream reaches in electric transmission ROWs were exposed to more light, had denser stream bank vegetation, were deeper and narrower, and had a greater area composed of pools. Peterson's study found that trout were more abundant in stream reaches within ROWs and concluded that the increase in incident sunshine resulted in a denser forb and shrub root mass which further stabilized stream banks, resulting in less stream bank erosion, deeper channels, and higher populations of trout. Peterson concluded that electric transmission ROWs need not constitute an adverse effect on headwater trout population densities in forested basins.

(CMP's Compensation Plan (revised Jan. 30, 2019) at 21.)

NRCM argues that the measures the Department Order requires the Licensees to implement to mitigate potential impacts to brook trout and brook trout habitat associated with clearing the corridor are insufficient, individually and collectively. NRCM argues that the compensation required for those remaining impacts that are not mitigated is insufficient, as well.

With respect to the range of mitigation requirements included in the Order, NRCM points to each and, in support of its claim of insufficiency, notes the difference between the benefits of the mitigation and benefits of a mature, full-canopy, forested buffer that could exist in the absence of a transmission corridor, and the existing commercial forestry, as well. NRCM's focus on what the mitigation lacks overlooks and undervalues the benefit of the impact minimization measures required by the Department Order.

For example, CMP originally proposed a 25-foot buffer where the corridor crosses streams. MDIFW commented that "this minimal buffer will not be adequate to protect coldwater resources," and recommended a 100-foot buffer consistent with its 2012 Recommended Performance Standards for Riparian Buffers in Overhead Utility ROW Projects. (MDIFW Comments, March 15, 2018 at 11.) The Department Order requires a 100-foot buffer on all perennial streams that contain coldwater fisheries. The Order referrers to these buffer areas as "riparian filter areas" in recognition that some vegetation within these areas will be cut and that the primary function of these areas will be to filter sediments and pollutants from the runoff entering streams. (The Board adopts this terminology, as well.)

While these riparian filter areas will not contain mature forest canopy to provide temperature regulation across the entire stream in many cases, or contain vegetation most suitable for contributing woody debris to streams, which NRCM accurately points out, these filter areas will provide some shading, and a valuable filter function and will help attenuate runoff flows. The benefit of these filter areas is reflected in MDIFW's recommendation, informed by its review of many development proposals, including other transmission projects. The Board finds these 100-foot riparian filter areas, as required in the Order, are a valuable and an important measure for mitigating impacts of the project on brook trout.

As articulated in its appeal and noted above, and as presented through witness testimony, NRCM is concerned that even with the 100-foot riparian filter areas the removal of taller, more mature vegetation within these areas will result in the loss of "shading, recruitment of organic matter and large woody debris, and bank stabilization." (Pre-filed Direct Testimony of J. Reardon at 21.) In addition to the maintenance of riparian filter areas, the Department Order requires other vegetation management that further mitigates the impact of the project on brook trout and brook trout habitat. Along Segment 1, the Order identifies 12 Wildlife Areas within which taller vegetation is required to be maintained within the corridor. Eleven of these Wildlife Areas contain one or more stream crossings and within these areas either a full height canopy or a minimum of 35-foot-tall vegetation is required.

While NRCM correctly notes that the primary reason for maintenance of this full height vegetation is not the protection of brook trout habitat (but rather the protection of other resources) the Board finds that maintenance of this vegetation in these areas also will help minimize the impact of the project on brook trout and brook trout habitat even if these full canopy height areas are not extensive throughout the corridor.

The Board finds that in addition to the full height vegetation areas, those Wildlife Areas where a minimum vegetation height of 35 feet must be maintained also will benefit brook trout and brook trout habitat by mitigating the impact of the project. NRCM argues that the minimum 35-foot minimum vegetation height should be called the maximum height, however, the use of the word minimum reflects only that vegetation shorter than the 35-foot minimum height or anticipated to be shorter than that height by the next vegetation maintenance cycle may not be cut. This terminology reflects that vegetation taller than 35 feet may be allowed. Depending on factors such as topography and conductor sag between structures, vegetation taller than 35 feet may be maintained.

Beyond terminology, in the Wildlife Areas where a 35-foot minimum vegetation height is required, this taller vegetation will provide better shading and better recruitment of organic matter than either a fully cleared corridor or a corridor managed with only riparian filter areas. While NRCM argues that taller and more mature trees would provide a better canopy, the Board notes the required 35-foot minimum height is not significantly different than the average vegetation height of 40 feet that is assumed throughout this forested region of Maine when evaluating visual impacts and screening provided by the forest. To put this in context, during the review of the applicant's Visual Impacts Analysis for the Department, James Palmer wrote, "40 feet is a reasonable estimation of the height of the opaque screen created by deciduous, evergreen, and mixed forest land cover in northern New England, however a quarter of the forested cover was less than 30 feet high." (Palmer Peer Review Comments, August 24, 2018, at 48.)

The Board finds that the Wildlife Areas are well located to mitigate impacts to brook trout waters. Of four priority areas pointed to by NRCM's witness in his hearing testimony, three have considerable overlap with Wildlife Areas with a 35-foot minimum height vegetation requirement. For example, the crossing of the South Branch of the Moose River is in Wildlife Area 2; the Cold Stream crossing is in Wildlife Area 7; and the Tomhegan Stream crossing is in Wildlife Area 9. (Compare J. Reardon pre-filed direct testimony at 11-12, identifying priority waters, with the Order, Appendix C, Table C-1, identifying streams within the Wildlife Areas.) Further, 66 streams[17] and not just 21, as stated by NRCM in its appeal, are within the Wildlife Areas where vegetation with a minimum height of 35-feet or taller is required. The Board finds the requirement in the Order to maintain 35-foot-tall vegetation within the select Wildlife Areas will meaningfully help minimize the impact of the project on brook trout and brook trout habitat.

Within the portions of Segment 1 that are outside the Wildlife Areas the Order requires tapering. This will result in taller vegetation along the edges of the corridor, including at stream crossings. NRCM argues that tapering will not "counteract" the impacts of the project. (NRCM Appeal at 18.) As with the other mitigation measures discussed above, this form of vegetation management will not eliminate potential impacts on brook trout or brook trout habitat, but will help minimize impacts. Many of the streams crossed by Segment 1 are less than 10 feet wide and trees shorter than would be found in a mature forest will provide adequate shade in the tapered zones and some woody debris inputs. Tapering also narrows the fully cleared width of the corridor. The Board finds tapering is another valuable form of impact mitigation or minimization.

Even with the measures discussed above that will minimize the impacts of the project on brook trout and brook trout habitat, impacts from the project will remain. Pursuant to the Site Law and NRPA, CMP proposed, and the Order requires, compensation for these impacts. The CMP-proposed compensation included placing covenants and deed restrictions on three conservation parcels, the Dead River Tract, the Grand Falls Tract, and the Basin Tract. These tracts are located along the Dead River, total 1,053.5 acres, and include 12.02 miles of rivers and streams known to function as brook trout habitat. A considerable portion of the stream frontage provided by these tracts is along the Dead River, but the tracts also contain perennial and intermittent streams. The 12 miles of streams in these conservation tracts exceed by one linear mile the

[17] This count is based on a review of the Natural Resource Maps for Segment 1, dated January 30, 2019.

cumulative length of stream impacted by the project, including both coldwater and non-coldwater streams.

In addition to these three conservation tracts, CMP proposed to contribute $200,000 to fund culvert replacements, with the goal of improving stream connectivity and improving access to and between brook trout habitat. CMP represented this amount could fund the replacement of 20 to 25 culverts, but based on the Department's experience with a culvert replacement grant program and testimony of an NRCM witness, the Commissioner determined significantly more funding would be required to replace this number of crossings. As a condition of the Order, the Licensees must contribute $1,875,000 for culvert replacement in the vicinity of Segment 1. Finally, to compensate for impacts to Roaring Brook Mayfly and Northern Spring Salamander habitat CMP proposed to contribute $180,000 to the Maine Endangered and Nongame Wildlife Fund to improve or protect such habitat elsewhere. These habitats typically also contain brook trout.

NRCM asserts that this compensation is inadequate because the brook trout habitat in the conservation parcels in not of the same type as the majority of impacted habitat and NRCM critiques the culvert replacement requirement, among other reasons, for having "no nexus" to the project's impact on brook trout habitat. (NRCM Appeal at 19.)

The adequacy of any compensation depends on the extent of the impact. Here, the Board begins by noting that throughout the permitting process MDIFW reviewed and commented on the project and paid particular attention to the potential impact to brook trout and brook trout habitat. MDIFW has considerable experience and expertise evaluating development impacts, including from transmission lines, on brook trout. With the expansion of riparian filter areas to 100 feet on all crossings along Segment 1 and on all coldwater stream crossings on the remainder of the project, along with the three proposed conservation tracts and the $200,000 funding CMP initially proposed for culvert replacement, MDIFW's assessment was that potential impacts to brook trout and brook trout habitat were appropriately minimized and compensated. The Board finds that the vegetation management required through conditions of the Order minimize, but do not eliminate, project impacts. With respect to the conservation value of the three tracts, the Board finds that, despite being not identical quality to the 11 miles impacted by the Project, the 12 miles of streams protected by the three identified conservation tracts are brook trout waters and conservation of these parcels will provide a meaningful benefit to the species.

Finally, and significantly, the Board finds that the Department Order's requirement that the Licensees dedicate $1,875,000 to culvert replacement in the vicinity of Segment 1 will add an extra layer of meaningful compensation for the impacts to coldwater fisheries and fishery habitat. Culvert replacement is an important and proven means of improving and restoring brook trout habitat, particularly benefiting this important native species. This is reflected in the culvert replacement grant program administered by the Department. Providing passage where it is blocked or limited allows greater access to and connectivity between habitat areas, improving habitat quality overall and resilience. With improved connectivity, brook trout have greater access to a wider range of habitat and are better able to avoid localized habitat impacts.

The Board finds this amount of quality culvert replacement directly improves brook trout habitat and benefits this native species and is a reasonable form of compensation for the impacts to brook trout and their habitat as a result of constructing a transmission corridor that involves some clearing at stream crossings. The Board finds the $1,8750,000, together with the other brook trout mitigation and conservation, adequately compensates for the project impacts.[18] The Board acknowledges that individual crossings to be replaced have not yet been identified and that with this comes some risk; however, establishing the fund without earmarking its use for specific projects also allows for strategic deployment of these resources in the future in alignment with other crossing improvement projects to maximize the overall benefit to brook trout in the vicinity of Segment 1.

The Board finds that with the conditions required in the Order, the project makes adequate provision for the protection of brook trout and will not unreasonably harm brook trout or brook trout habitat, satisfying the applicable criteria in NRPA, 38 M.R.S. § 480-D(3) and the Site Law, 38 M.R.S. § 484(3).

b. Habitat Fragmentation and Wildlife Travel Corridors

The Board has reviewed the testimony and recognizes the uniqueness and significance of the western Maine region where much of the project would be located, including Segment 1. Much hearing testimony focused on the degree to which the Segment 1 area is part of a largely unfragmented forest block of 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 Board agrees with the testimony and the Commissioner's finding that the western Maine region supports exceptional biodiversity, and is expected to be especially effective at maintaining biodiversity as the climate changes, and that these qualities make the area unique and important for wildlife. But the Board also finds the record shows that within this western Maine region there is timber harvesting, an extensive network of land management roads, some residential camps, and other development. Forest management is the predominant activity, resulting in a landscape that is a mosaic of various-aged forest, ranging from mature to recently harvested. The mosaic changes over time as harvested areas mature and mature areas are harvested.

The potential for Segment 1 of the project to fragment the habitat in this region is one area of general agreement. For example, CMP recognized in its application, as quoted in the Order, that transmission line corridors may affect species movement, density, and survival, and create new linear edges. These edges – the border between forest and opening – reduce interior habitat, affect movement, and may contribute to biodiversity decline. Among others, witnesses for Appalachian Mountain Club testified about the impact of habitat fragmentation and the edge effect (*see, e.g.,* Publicover pre-filed direct testimony at 10-12), as did witnesses for Friends of the Boundary Mountains (*see, e.g.,* McMahon pre-filed direct at 7-18), and TNC (*see, e.g.,* Hunter pre-filed direct testimony at 3-8).

[18] NRCM and Licensees dispute whether the culvert replacement funding required in the Order would be sufficient to fund approximately 25 crossings. The Board recognizes that the exact number of crossings that can be replaced with the funding will depend on the crossings ultimately selected, as will the final number of stream miles to which brook trout access will be improved. The Board finds, however, that the average culvert replacement cost estimated in the Order is reasonable and supported, as noted in the Order, by the Department's experience and testimony of NRCM's witness, Mr. Reardon.

While the potential for habitat fragmentation, in general, appears to be agreed upon, the record includes conflicting testimony on the significance and degree of this impact. The breadth and extent of testimony and record evidence on this issue is considerable. For example, witness testimony on habitat impacts and those related to fragmentation were provided by: Calhoun, Emerson, Goodwin, Hunter, Joseph, McMahon, Merchant, Mirabile, Publicover, Simmons-Legaard, and Wood. The Board finds that this testimony demonstrates that different species would be affected differently by the creation of a transmission line corridor where one presently does not exist. While some species might benefit, overall, the creation of Segment 1 would have a negative impact on wildlife habitat.

One species in particular that was discussed during the hearing is pine marten. While pine marten is not listed as threatened or endangered, which would warrant heightened regulatory protection of its habitat, testimony from Simmons-Legaard established that pine marten can be considered an "umbrella species," meaning that planning for pine marten often serves the purpose of planning for a wide range of other wildlife. The value to other interior forest species of taller vegetation, at least 30- to 40-feet tall, closed canopies, and unfragmented habitat blocks was testified to by witnesses such as Hunter, Publicover, and Simmons-Legaard.

To minimize the impact of the project on wildlife habitat and specifically to minimize the edge effect and impact of habitat fragmentation, the Department Order requires the preservation of 12 Wildlife Areas and a range of different types of vegetation management. These Wildlife Areas and the types of vegetation management are discussed above in Section 10(B)(5) and (8) and include tapering, maintenance of vegetation with a minimum height of 35 feet, and maintenance of full canopy height vegetation.

Reflected in the Commissioner's requirement that the Licensees must implement these forms of vegetation management is a recognition, which the Board finds is supported by the evidence in the record, that the more vegetation retained within the Segment 1 corridor and the taller this vegetation can be allowed to grow, the smaller the fragmentation impacts on wildlife habitat. The Board finds that tapering will help minimize the impacts of Segment 1. By retaining significantly more vegetation within the corridor, in stages of heights, tapering eliminates the creation of the traditional hard edge along a transmission line and also reduces, but does not eliminate, the lateral reach of the edge effect beyond the bounds of the 150-foot-wide corridor. Tapering significantly narrows the scrub-shrub opening along the center of the corridor, reducing the time and distance crossing wildlife would be out in the more open shrub-scrub habitat.

Within the Wildlife Areas where a minimum vegetation height of 35 feet is required by the Order, this taller vegetation is required across the entire width of the corridor except where access roads must be retained. While vegetation with a minimum height of 35 feet is not equivalent to full canopy height vegetation in terms of the cover it provides, the record evidence supports that vegetation of 30 feet and taller aids wildlife movement. The Board finds that the maintenance of taller vegetation in Wildlife Areas further reduces the fragmenting impact of the Segment 1 on wildlife habitat and promotes connectivity. The Board also finds the locations of the Wildlife Areas with taller vegetation across the corridor were rationally selected, based on evidence in the record, to facilitate wildlife movement, with a focus on stream crossings and

areas adjacent to conserved land and taking into consideration the habitat connectivity priority areas identified by TNC. The Wildlife Areas and vegetation management required within them are meaningful and appropriate forms of mitigation that strategically minimize the impact of the project.

The Board has considered how meaningful and effective these vegetation management requirements will be over time, which is one of the questions raised in the appeals. NRCM points out that Segment 1 crosses through a range of forest stand types and ages. (NRCM Appeal at 22.) The age and composition of the forest at the time of construction will influence both what a tapered corridor and a minimum 35-foot vegetation height Wildlife Area looks like in any one area. The full benefit could be years after construction. Additionally, NRCM argues, any benefit – whether immediately following construction or in the future as trees within the corridor grow – could be limited in time if the vegetation is or matures as an even-aged stand. (NRCM Appeal at 22, 24.) For example, if even aged, the vegetation within a Wildlife Area would grow to approximately 35 feet at the same time, be cut at the same time, and eliminate the benefit of that Wildlife Area until taller vegetation regenerates.

The Department Order acknowledges, and the Board agrees, that how the vegetation management is implemented will influence its value. The Order requires the Licensees to establish in their Vegetation Construction Plan and Vegetation Management Plan (VMP) how vegetation will be managed in accordance with the Order (Condition #12) and expressly requires the Licensees "to 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." (Order at 78.) Even with these requirements, NRCM raises questions about how vegetation management will be monitored and enforced and whether its maximum effectiveness can be ensured. (NRCM Appeal at 22.)

The Board finds the concern expressed by the appellants about ongoing monitoring and enforcement of the vegetation is well founded. Therefore, to ensure the effectiveness of the required vegetation management, the Board modifies the Department Order to add the following requirements:

- Prior to the first vegetation maintenance cycle and at least every three years thereafter, the Licensees must collect lidar data for Segment 1. The data must enable evaluation of vegetation height and canopy closure within each progressively taller tapered zone and the Wildlife Areas. The initial lidar data set for Segment 1 capturing conditions prior to the first vegetation maintenance cycle must be collected on or after June 1, 2021.
- After the initial lidar data set is collected, the Licensees shall identify on GIS maps submitted to the Department the following: those areas within the tapers of Segment 1 and within the Wildlife Areas in which vegetation taller than the minimum height required may be maintained (e.g., as a result of topography, conductor sag, and project design). These maps shall be incorporated into the VMP and vegetation taller than the minimum requirements shall be maintained in these areas.

- At least two months prior to each vegetation maintenance cycle, the Licensees must provide the Department with GIS maps indicating where vegetation will be removed in accordance with the VMP, along with a narrative description of what vegetation will be removed.
- After vegetation is removed and once the subsequent set of lidar data is collected, the Licensees must provide the Department with GIS maps indicating where the vegetation was removed, along with a pre- and post-vegetation removal analysis that evaluates and compares vegetation height and describes the composition of the stand. Additionally, this analysis must identify any canopy openings greater than 2,500 square feet within any Wildlife Area. The analysis must be submitted to the Department within 90 days of collection of the lidar data. If the analysis indicates within a Wildlife Area with an opening in the canopy greater than 2,500 square feet that natural regeneration will not result in closure of the canopy within five years of the most recent vegetation removal, the Licensees must submit a replanting plan to the Department for review as part of the submitted analysis. The replanting plan must provide for the planting of native species, of such a size and in such quantity, that the planting will result in a closed canopy within five years of the vegetation having been removed.

The Board finds that, similarly, vegetation management within the Wildlife Areas is critically important because it is within these areas that habitat connectivity across the Segment 1 corridor is best provided for, minimizing the impact of the project. To maximize the benefit of the mitigation provided by the Wildlife Area and specifically those with a minimum vegetation height of 35 feet, careful management of the vegetation in these areas is important. Additionally, even with careful management, if an even aged stand exists and additional, proactive measures are not taken, much of the stand could be cut during the same maintenance cycle if the stand encroaches into the wire safety zone at the same time. To avoid such a result and ensure the Wildlife Areas are managed to maximize the benefit of the vegetation that may grow across the corridor and under the transmission lines, the Board modifies the Department Order to require the following:

- The Licensees must include in their VMP the steps that will be taken to manage each Wildlife Area with a 35-foot minimum vegetation height to maximize the closed canopy conditions and avoid growth of even aged stands. The VMP must include the quantitative metrics that will be used to evaluate whether a well-distributed stand of trees is growing and to identify (a) when removal of vegetation less than the 35-foot height minimum and (b) when the planting of vegetation is appropriate to promote growth of a well-distributed stand.
- The Licensees must include in their VMP provision that if lidar data indicates that there is an opening in the canopy in excess of 2,500 square feet within a Wildlife Area, exclusive of access roads and structure pads, the Licensees must replant those areas with native tree species if natural regeneration will not result in closure of the canopy to less than 2,500 square feet within five years of the vegetation having been removed.
- The Licensees must submit the revised VMP to the Department for review at least four months prior to the start of commercial operation.

Finally, even with the requirements in the Order that minimize the impact of the project on wildlife habitat, the Commissioner determined impacts remained that warranted conservation. As a condition of the Order, the Licensees must permanently conserve 40,000 acres in the vicinity of Segment 1 and develop a related Conservation Plan. Among other things, the Order establishes that 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." (Order at 81.)

NRCM and West Forks argue that this conservation is inadequate. In support of its argument, NRCM claims the conservation amount is "based on best-case assumptions about the environmental benefits of tapering and Wildlife Areas" and appears to assume that a standard working forest easement allowing "commercial forestry to continue" would satisfy the conservation requirement. (NRCM Appeal at 16.) Neither is accurate. As discussed above, the Board finds each of the forms of vegetation management required in the Department Order will help minimize the fragmentation impacts of the project and, with the modifications required in this Board Order, the full benefit of these measures will be achieved. While this vegetation management is an important and necessary component of the project, its value has not been overestimated as the appellants suggest or assessed based on best-case assumptions. This is reflected in how the required compensation, specifically the required conservation, was calculated. In requiring 40,000 acres of conservation, the Commissioner calculated this total without deducting any of the areas with taller vegetation, either Wildlife Areas or tapered areas, from the conservation formula. As explained in the Order:

> 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.

(Order at 80.) Applying an 8:1 ratio, the same ratio used by the Department with respect to off-site compensation for wetland impacts, the Commissioner concluded 40,000 acres of conservation was warranted. As noted above, these 40,000 acres must be managed to promote habitat connectivity and conservation of mature forest areas. While commercial timber operations are not expressly precluded by the Order, typical commercial forestry operations are not conducted to achieve conservation of mature forest areas. Thus, while conceivable that some wood could be commercially harvested within the conservation area, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not.

A chief concern expressed by West Forks is that the specific area to be conserved as part of the required compensation is not identified in the Order. (West Forks Appeal at 12-13.) While compensation parcels may be identified in the course of the permitting process and, therefore, identified in a Department order, and several conservation parcels to compensate for impacts

other than habitat fragmentation totaling approximately 2,280 acres[19] were identified here, it is not uncommon for compensation to be required without identification of the area that will be conserved or improved. The type of compensation most commonly required as part of Department permitting is compensation for impacts to wetlands, and this most often is done through in-lieu-fee payment to the Maine Natural Resource Conservation Program. There the actual areas conserved or improved are identified after permitting is complete consistent with the guidelines governing that program.

Here, the Order sets out the guidelines to ensure the conservation parcel(s) and the management of these lands achieves the intended purpose, including the requirement that the Department review and approve the Conservation Plan. This Conservation Plan must contain, among other things, a draft forest management plan establishing how the conservation area(s) will be managed. The areas must be managed consistent with the primary goal of the Conservation Plan – compensating for the fragmenting effect of the transmission line on habitat in the region of Segment 1 and the related edge effect. This includes providing (1) blocks of habitat for species preferring mature forest habitat and (2) wildlife travel corridors along riparian areas and between mature forest habitats. While, as noted above, commercial timber operations are not expressly precluded, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan.

After consideration of the arguments raised in the appeals that the conservation of 40,000 acres is not adequate to compensate for the value of the habitat affected, as asserted by the appellants, the Board finds that conservation should be required at a ratio of 10 to 1, and a total of 50,000 acres of conservation. The Board finds that this amount adequately compensates for the impacts of the project on wildlife habitat, including habitat fragmentation. Further, and overall, the Board finds that with the requirements in the Department Order, along with the added requirements related to vegetation management and tapering within Segment 1 described above, the impacts of the project on wildlife and wildlife habitat will be adequately minimized and compensated for. The Board finds that, under the terms and conditions approved in this Board Order, wildlife lifecycles and wildlife habitat are adequately protected from adverse effects from the project, as required pursuant to Chapter 375, § 15.

11. RELATIONSHIP BETWEEN STATE ENVIRONMENTAL PERMITTING AND FEDERAL SAFETY REQUIREMENTS

Appellant NextEra argues that Board should find the Department Order legally defective because the Commissioner did not evaluate the applicability of the North American Electric Reliability Corporation (NERC) Reliability Standard FAC-003-4 to the project and whether the vegetation management required in the Order is consistent with that standard. (NextEra Appeal at 8-9.) Suggesting that a non-profit organization's standard that the Federal Energy Regulatory Commission requires adherence to preempts state environmental permitting, NextEra states: "It

[19] The Basin Tract, Lower Enchanted Tract, and Grand Falls Tract together include 1,053.5 acres. The Little Jimmy Pond Tract, Flagstaff Lake Tract, and Pooler Pond Tract together include 510.75 acres. The Upper Kennebec River DWA conservation includes 717 acres.

is axiomatic that the Department cannot impose a condition that is inconsistent with a federally approved and mandated NERC Reliability Standard." (NextEra Appeal at 8.)

As an initial matter, NextEra points to no law or regulation that preempts the Department's environmental permitting authority over the NECEC project, nor is the Board aware of any such provision. Additionally, the case law pointed to by NextEra is not on point; the cases focus on wholesale rates and a gas pipeline, not state environmental permitting of a transmission line. The Board finds that to construct and operate the project the Licensees must comply with Maine's environmental laws, including Site Law and NRPA. These laws are not preempted.

To the extent NextEra contends the Commissioner's decision is unlawful because it imposed conditions that result in some alteration of the project, for example, by imposing vegetation management conditions that narrows the Segment 1 corridor, the Board finds this contention without merit. The Commissioner has broad authority to approve, approve with conditions, or deny a permit application. 38 M.R.S. § 344(2-A). This is reinforced in the Site Law itself and the rules interpreting it. As discussed in Section 10 above, Site Law Section 487-A(4) provides: "The [D]epartment may approve or disapprove all or portions of the proposed transmission line . . . and shall make such orders regarding its location, character, width, and appearance as will lessen its impact on the environment, having regard for any increased cost on the applicant." In issuing a conditional approval with vegetation management requirements that narrow the width of the corridor and alter its appearance, this is exactly what the Commissioner did. Chapter 375, § 14(D), implementing the Site Law, provides: "The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will have no unreasonable adverse effect on scenic character . . . ." And Chapter 375, § 15(D) states: "The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that a developer has made adequate provision for the protection of wildlife and fisheries." Accordingly, the Board rejects the argument that the Department is prohibited from placing reasonable conditions on the project that may, as a consequence, require alteration of the project as it was proposed.

The Board's focus on appeal is on whether the project satisfies the controlling state law, specifically the Site Law and NRPA. Neither the Commissioner nor Board is authorized to interpret and apply federal regulatory standards or safety codes referred to in federal standards. The Board notes that proposed projects often require federal permits in addition to state approval and if a subsequent federal proceeding requires changes to a proposed project that has been issued a permit by the Department, the permit holder must reconcile the two approvals by obtaining an amendment to one of the permits. With respect to the NECEC project, the Commissioner stated that the required vegetation management "is integral to the Department's decision and necessary to ensure the project does not violate applicable statutory and regulatory standards." (Department Order at 82, n. 34.) The Board agrees with the Commissioner's assessment about the importance of the vegetation management required in the Department Order and as strengthened by the modifications in this decision.

By not appealing the Department Order the Licensees have indicated that the proposed project can be constructed in accordance with the conditions of the permit. And throughout the permitting process CMP has specifically stated its commitment to meeting NERC vegetation

management requirements. This is reflected, for example, in both the Vegetation Construction Plan and VMP, including as they were revised in January 2019 to address the two areas where tapering was proposed at that time and the maintenance of taller vegetation across the corridor in Upper Kennebec River Deer Wintering Area. Notably, concerns about CMP's proposed vegetation management and commitment or ability to satisfy NERC standards were not raised by NextEra at that time. Rather, questions were raised about whether tapering and taller vegetation would be appropriate in more places than CMP proposed as a way to mitigate the environmental impact of the project. For example, on April 1, 2019, at the first day of the public hearing, when cross-examining CMP witnesses about the applicant's evaluation of alternatives, counsel for NextEra posed questions suggesting CMP should have considered tapering along all of Segment 1 and not just the two areas proposed for tapering at that time. (Hearing Transcript, Day 1, April 1, 2019, at 274:24-25 ("Did you look at tapering all of Segment 1?"); 276:7-10 ("Did your work assessing how to avoid, mitigate and compensate include looking at alternatives like undergrounding and tapering?").) Additionally, during the sixth day of the public hearing, on May 9, 2019, when vegetation management, including maintenance of taller vegetation and tapering, was a central topic of discussion, NERC standards were never mentioned by any of the parties, including by NextEra.

The Board finds the absence of an analysis by the Commissioner of whether the Project will meet the NERC standards is not a legal deficiency, as NextEra argues, but rather an appropriate approach given the Commissioner's task to review the project under the controlling state law. Had NextEra wished to present evidence that tapering or the maintenance of taller vegetation within the corridor would not be possible, it had ample opportunity to do so during the public hearing process. In addition, CMP could have appealed the Commissioner's decision. There is no need for the Board take new evidence on federal requirements that are beyond the scope of the Board's review. The Board will not review the project for compliance with the NERC standards.

Finally, NextEra argues that, aside from the issue concerning the NERC standards, the vegetation management requirements in the Order will influence pole heights and no consideration was given to potentially taller pole heights. The Board finds this is not the case. First, NextEra is not correct that tapering will require taller poles. Second, the record reflects that the potential for taller poles to be needed to allow for the maintenance of taller vegetation within the corridor (e.g., a minimum vegetation height of 35 feet in certain Wildlife Areas) was considered by the Commissioner. For example, when Department staff asked CMP about its ability to maintain taller vegetation at specific stream crossings along the corridor, CMP submitted information in response that included necessary pole heights at the individual crossings. CMP also identified where taller poles might be needed in the vicinity of priority areas for habitat connectivity that were identified by The Nature Conservancy. These areas were incorporated, in part, into the Wildlife Areas designated in the Department Order and the analysis of scenic impacts in the Department Order reflects consideration of taller poles in Wildlife Areas. The Board finds, contrary to NextEra's assertion, that the Commissioner reasonably and appropriately considered the relationship between the required vegetation management and pole height when evaluating the impacts of the project.

In sum, the Board finds that the vegetation management requirements in the Department Order, as strengthened in this decision are appropriate conditions, validly authorized by state statutes

and rules, and within the regulatory purview of the Commissioner and the Board. The Board also finds the Department appropriately analyzed vegetation management as it applies to standards in the Site Law and the NRPA and rejects NextEra's argument that the Department Order is legally deficient for not independently evaluating how NERC standards would apply to the project.

12. ALTERATION OF CLIMATE

Appellant NRCM raises procedural and substantive challenges to the Department's consideration of greenhouse gas emissions. NRCM states the Department "barred critical analysis" of CMP's purported greenhouse gas benefits by "denying parties an opportunity to vet CMP's greenhouse gas claims in an open hearing process." (NRCM Appeal at 32.) NRCM also alleges the Department failed to discuss the issue adequately in decision documents and, thus, "ignored compelling evidence" submitted by the appellants. (NRCM Appeal at 33.)

Chapter 3 explicitly grants a presiding officer authority to limit issues to be heard at a hearing when no prejudice to a party will result. With respect to the topic of the potential impacts to greenhouse gas and climate change, parties requesting inclusion of this topic as a hearing topic were given an opportunity to articulate their position and provide the statutory and regulatory basis for their request. Parties interested in responding to these requests similarly were provided an opportunity to do so in writing. The Department's Presiding Officer for the hearing considered which statutory and regulatory criteria should be designated as hearing topics and, in the third procedural order, determined that "net greenhouse gas emissions will not be added as a topic to be addressed at the hearing, however the parties may submit written evidence on this issue into the record." Other requested topics also were not designated as hearing topics as the amount of hearing days was not open-ended and was focused on specific statutory criteria, and those most at issue. While the decision meant the topic of greenhouse gases would not be discussed orally at the hearing, NRCM had the opportunity to provide any written evidence and related argument it desired. NRCM submitted written evidence on the topic on May 9, 2019. Evidence on this topic was also submitted by other parties and members of the public.

NRCM does not provide any support for its allegations the Department excluded such evidence or "barred critical analysis" during the proceeding, nor any basis for the claim they were prejudiced by the Presiding Officer's decision that the issue could be adequately addressed through written submissions. The parties availed themselves of the opportunity to submit written evidence specific to the issue and argument as to how it should be considered by the Department in its weighing of the reasonableness of the project. While it can be considered in judging the reasonableness of specific impacts of a proposal, the Board notes that the issue of whether a proposed project will impact greenhouse gas emissions is not a separate licensing criterion in either the Site Law or NRPA. The Board finds the choices of issues to be addressed at a hearing, as contemplated by Department rules and the Maine Administrative Procedure Act, was fairly and reasonably decided and no party to the proceeding was prejudiced by this ruling.

Regarding the allegation the Department did not consider the evidence submitted by NRCM or adequately analyze the issue, the Board turns to the Department Order itself. The introductory paragraph of Section 17 of the Order states: "The Department received extensive public comment, as well as written argument from [Intervenor] Groups 3 and 4 and the Applicant,

concerning whether and how potential greenhouse gas emission reductions resulting from the project have regulatory significance under the applicable permitting standards." The Order briefly summarizes key aspects of the evidence and written comments and addresses the relationship between greenhouse gases and the Department's regulatory standards. Lastly, the Department references other records it sought, included in the record, and utilized in making its findings, stating: "The Department reviewed documents in the PUC's proceeding, including the London Economics International, LLC report. The Department also reviewed the Examiner's Report and finds its conclusions to be credible." The PUC retained London Economics International, LLC to provide an independent review of the likely benefits, including greenhouse gas benefits, as a part of CMP's Request for Approval of a Certificate of Public Convenience and Necessity. The PUC Examiners' Report articulates the PUC staff's assessment of evidence in the record in that proceeding and represents their recommendation presented to the Commission.

The Board disagrees with NRCM's contention that evidence submitted by appellants was not considered. The Department directly references such submissions in the Order in addition to similar comments submitted by members of the public. The Board interprets these statements as a summarization of positions considered in the Department's review. While the Department did not refute NRCM's contentions point by point, such detail is not a requirement. However, careful examination of the Commissioner's statements in the Order and more specifically the broader contexts of the cited evidence demonstrates that the Commissioner did consider appellant's arguments in detail and disagreed.

NRCM challenges whether the Department appropriately assessed the PUC conclusions in the Examiners' Report as credible. Arguments submitted by NRCM on appeal were addressed in detail during the PUC proceeding, a proceeding in which NRCM intervened.[20] The Department had access to these records and the Order states that Department staff reviewed them in its proceeding. Specifically, the Department stated that it found credible the conclusions in the Examiners' Report, including 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 greenhouse gas emissions through corresponding reductions of fossil fuel generation (primarily natural gas) in the region." (Order at 105 (quoting Examiners' Report at 114).) The PUC adopted the recommendations and findings of the Examiners' Report in its proceeding regarding the NECEC project.

The PUC decision was appealed, with the issue of whether the NECEC would help lower greenhouse gas emissions being one of the issues in the appeal. The PUC decision, including its conclusions on this issue, was upheld by the Law Court. *NextEra Energy Res., LLC v. Maine PUC*, 2020 ME 34.[21]

[20] Public Utilities Commission Examiner's Report (March 29, 2019), Docket No. 2017-00232, at 112 ("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 it 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.)

[21] "The [Public Utilities] Commission also found that the project would result in a reduction of greenhouse gas emissions. . . All of these findings are supported by significant record evidence." *NextEra Energy Res., LLC v. Maine PUC*, 2020 ME 34, ¶ 30. Similarly, the Law Court concluded the PUC's findings that the NECEC project

The Board has reviewed the record, including comments and arguments presented by the appellant, and concurs with the Department's analysis of the issue. The PUC Examiners' Report provides analysis of the greenhouse gas issues raised by appellant and the Board finds that the evidence supports the Commissioner's finding that the information in the Examiners' Report was credible. The Board similarly concludes that the findings on this issue by the PUC, a sister agency with expertise on sources of power generation, after a more detailed examination and one in which NRCM participated, should reasonably be given weight in the Department's analysis. Accordingly, the Board finds, based on the evidence submitted by the parties and by the public, and the PUC materials in the record, that greenhouse gas reductions are likely as a result of this project, and a benefit in weighing the reasonableness of adverse effects of the project.

13. DECOMMISSIONING REQUIREMENTS

The Department Order requires the Licensees to submit a decommissioning plan within one year of commercial operation of the project. Among other things, this plan must include financial assurance for the cost of decommissioning, and this cost estimate and associated financial assurance must be updated throughout the life of the project according to a schedule set in the Order. While the applicable permitting standards do not expressly require creation of a decommissioning plan, the Department found such a plan necessary here, citing the Site Law, 38 M.R.S. § 484(3). This section requires that a permit applicant demonstrate its project will not have an adverse impact on, among other things, scenic character, and natural resources. The Commissioner determined that an operating project fulfilling its project purpose would satisfy this statutory requirement, provided the conditions established in the Department Order were met. At the end of the project's useful life or if it ceased operating, the Commissioner found the project would no longer be delivering on its project purposes and that the impacts of the Segment 1 infrastructure thus would constitute an unreasonable adverse effect on scenic character and natural resources. On this basis the Department Order requires the submission of a decommissioning plan, accompanied by corresponding financial assurance, within one year of the start of commercial operation of the project.

Appellant West Forks objects to the Order's timing for submission of the decommissioning plan and incorporated financial assurance. Specifically, West Forks argues that the requirement in the Order that the Licensees demonstrate financial capacity to carry out the decommissioning does not conform to the general financial capacity standards set forth in the Site Law, 38 M.R.S. § 484(1), as interpreted by the Department's Site Law Financial Capacity Rules, Chapter 373.

Title 38, Section 484(1) sets forth the standard for financial and technical capacity under the Site Law. The statute requires applicants to submit evidence that demonstrates financial means to "develop the project in a manner consistent with state environmental standards and with the provisions of [Site Law]." The law also allows the Department to issue a permit that allows a developer to provide the final demonstration of financial capacity after the permit is issued, but before the start of construction, in a form the Department deems adequate. Chapter 373 interprets and expounds upon the statutory criterion, requiring an applicant to have "financial capacity to

"will result in incremental hydroelectric generation" and "will reduce greenhouse gas emissions in the region" are "factual findings supported by substantial evidence in the record." *Id.* at ¶ 37.

design, construct, operate, and maintain the development in a manner consistent with state environmental standards and the provisions of the Site Law . . . for all aspects of the development, and not solely the environmental protection aspects." Ch. 373, § 2(A). Also, the rule reiterates that 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." Ch. 373, § 2(A).

West Forks and the Licensees urge different interpretations of how this language interacts with the decommissioning plan required in the Order. West Forks argues that the decommissioning plan falls within the meaning of "all aspects of the development" and argues, pursuant to Chapter 373, that financial capacity for decommissioning must be supplied prior to a decision on the application, or at least prior to the start of any site alterations. (West Forks Appeal at 16.) The Licensees argue the rule only requires a financial capacity demonstration "'to design, construct, operate and maintain the Development' – not to decommission the project at the end of its productive life." (Licensees' Response at 43.)

As an initial matter, the Board agrees that requiring the decommissioning of Segment 1 upon the project reaching the end of its useful life or ceasing to operate is appropriate. Given the largely undeveloped nature and ecological significance of the surrounding area, the visibility of certain project components from scenic resources and by recreational users of the area, the singular use of a transmission line and associated physical infrastructure, a nonfunctioning project in this previously undeveloped corridor would constitute an undue adverse effect on scenic character and natural resources. Chapter 373, § 2(B)(1) does include, in a list of itemized costs that a cost estimate may include, "restoration of the site, if applicable" but this list does not mandate that financial capacity to decommission be required. The rule allows some discretion on the part of the Department in what major costs it will require to be included in the cost estimate, and thus in the extent of financial capacity that must be demonstrated prior to construction. Based on the arguments of West Forks about the importance of financial capacity for decommissioning, and the totality of the circumstances, the Board will modify the Department Order to require a demonstration of financial capacity for decommissioning before the resumption of construction of the project.

The Department Order appears to assume that if construction is commenced and the associated impacts incurred, operation will follow. This is reflected, for example, in the trigger for decommissioning discussed in the Order, which focus on contracts not being renewed or electricity not being delivered for a period of 12 consecutive months. The Board finds these triggers are reasonable once the project becomes operational.

It is possible, however, that the project will be constructed or partially constructed and never energized. The need for decommissioning a constructed Segment 1 that is never operated is the same as the need for decommissioning Segment 1 after operation at the end of its useful life. The Board notes that construction was commenced, pursuant to the valid and effective Department Order, but was halted, in part due to the November 23, 2021 Suspension Order. The suspension may be lifted under certain circumstances as outlined in the Suspension Order and with the Board's decision here it may be possible in the future for the Licensees to resume construction of the project, including if this Board Order is appealed to Superior Court. To address this set of

facts and any possible scenarios under which Segment 1 might be all or partially constructed and not energized, the Board finds it is necessary for the decommissioning plan, including the related financial assurance demonstration, to be finalized and submitted to Department for review within 120 days of the date of this Order. Further, in addition to the components required by the Department Order, the plan must include that along with nonrenewal of the current contracts triggering implementation of decommissioning, termination of the current contracts similarly triggers the requirement to begin decommissioning within 18 months of termination. In addition, if construction on the project has not resumed within 24 months of the date of this Order, decommissioning must commence. The Board finds that with these three modifications to the decommissioning requirements described in Section 18 of the Department Order, Segment 1 of the project and associated infrastructure will not adversely affect the scenic character and natural resources of the region in which it is located.

14. HEARING REQUEST

In their appeals, all three appellants – NextEra, NRCM, and West Forks – request a public hearing. Hearings are governed by Chapter 2, § 7 of the Department's rules. Section 7(B) requires that the request must "specify the reasons why a hearing is warranted." Hearings are discretionary unless otherwise required by law. Section 7(B) provides that "[t]he Department will hold a hearing in those instances where the Department determines there is credible conflicting technical information regarding a licensing criterion and it is likely that a hearing will assist the Department in understanding the evidence."

Here, the Commissioner held a public hearing, spanning five consecutive days in 2019, April 1 through 5, with a sixth hearing day held a month later on May 9. As part of this hearing process parties offered 35 witnesses who focused on many of the issues central to the present appeals. In addition to oral testimony and cross-examination, witnesses provided pre-filed direct, rebuttal, and, in some instances, sur-rebuttal testimony. Parties also had the opportunity to submit written briefs advocating for their respective positions. On two evenings during the hearing, members of the public also had the opportunity to provide oral comments. In addition to the hearing process, parties and members of the public had the opportunity to provided written comments on the application, including on topics not focused on during the six days of hearing.

The result of the application review process conducted by the Commissioner, which spanned nearly two and a half years, is a comprehensive administrative record. The parties had the opportunity to present witnesses who provided testimony, some of which involved conflicting testimony between witnesses for parties for and against the project. As discussed throughout this Board Order, the existing administrative record is extensive and is sufficient for the Board to evaluate the project and assess whether it meets the permitting standards.

For example, one topic area on which the appellants request a public hearing is TRI. Specifically, NRCM, in its offer of proof, states it would submit written or oral testimony with regard to the "illegal BPL lease." (NRCM Appeal at 35.) The lease at issue is in the record. The "legality" of the lease is a question for the courts. Whether the lease was a sufficient form of TRI for the Commissioner to have processed CMP's permit applications is an administrative question raised

on appeal. While the answer to this question is disputed by the parties, the Board finds there is no further fact finding that would aid the Board in resolving this administrative issue.

Unlike the question of TRI, which does not involve a fact-intensive assessment, central to several of key issues on appeal are the factual findings made by the Commissioner. Specifically, the question of whether the underground alternative is a practical alternative less damaging to the environment than the permitted project is raised on appeal. Also raised on appeal is whether the impact of the project on brook trout and brook trout habitat and whether the fragmenting effect of the Segment 1 corridor are reasonable as these impacts are mitigated and compensated for.

These key issues on appeal also were key issues during the original permitting of the project. For example, brook trout impacts were identified early in the review process by Department staff and MDIFW; considerable testimony also was presented on impacts to coldwater fisheries during the hearing, including by NRCM witness Reardon. Habitat fragmentation was the focus of even more testimony, including by witnesses: Mirabile, Goodwin, Johnston Calhoun, Caruso, Cutko, Emerson, Hunter, Joseph, McMahon, Merchant, Publicover, Russell, Simons-Legaard, Towle, and Wood. As NRCM notes in its request for a public hearing, the project approved in the Department Order was not exactly the same as the project proposed by the applicant. Through the imposition of conditions, the Commissioner required further impacts minimization measures and further compensation.

Based on the Board's review of the record, these additional requirements grew out of the Commissioner's consideration and assessment of the evidence presented through the application review process, including the hearing. This, in part, reflects the thoroughness of that process. Particularly, notable is that these key issues now presented on appeal were the focus of the sixth day of public hearing, held after the initial week-long set of hearing days and after the Commissioner and parties had had a chance to review the previously presented material. As reflected in the 10th Procedural Order, the cost, logistics, and environmental impacts of underground transmission line construction were evaluated during that sixth day of hearing, as was the potential for tapering and maintenance of taller vegetation under the conductors to minimize environmental impacts of the project.

The Board finds the parties have had the opportunity to present written evidence and witness testimony on the alternatives analysis and environmental impacts of the project, including on how different forms of vegetation management might mitigate these impacts. The Commissioner's decision followed consideration of all information gathered during the review process. This record, on appeal, allows the Board to evaluate both the Commissioner's decision in the Department Order and the project itself to determine whether the project meets the applicable permitting standards. The Board finds the record before it allows full evaluation of the NECEC project and the issues on appeal and that a hearing is unlikely to further aid the Board in its decision-making. Therefore, the Board declines to exercise its discretion to hold a public hearing as part of its consideration of the appeals of the Department Order. The requests for public hearing are denied.

APPEAL OF TRANSFER ORDER

15. SITE LAW TRANSFER ORDER

On September 25, 2020, NECEC LLC submitted applications to the Department for partial transfer of the Site Law and NRPA permits and water quality certification from CMP to NECEC LLC. NECEC LLC included a signed and completed transfer application form for the Site Law permit and a separate, signed and completed Permit by Rule Notification Form pursuant to Chapter 305, Permit by Rule Standards, § 17, for partial transfer of the NRPA permit. NECEC LLC also provided a number of attachments in support of both application forms. The parties to the underlying licensing proceeding were notified of the Site Law transfer application and the record was open for public comment on that application from the date it was filed until December 4, 2020.

On December 4, 2020, the Acting Commissioner approved the application for a partial transfer of the May 11, 2020 Department Order from CMP to NECEC LLC (Transfer Order). The Transfer Order (titled "Site Location of Development Act Partial Transfer Findings of Fact and Order") relates to NECEC LLC's transfer application under the Site Law.[22]

The requested partial transfers grew out of the PUC proceeding. The PUC, in its May 2019 "Order Granting Certificate of Public Convenience and Necessity and Approving Stipulation" approved a Stipulation requiring CMP to transfer a portion of the project and its associated development costs to a special purpose entity which was not a subsidiary of CMP. CMP designated NECEC LLC as that entity. The portions of the project subject to the transfer include the new HVDC transmission line (Segments 1, 2, and 3 of the transmission line); the converter station in Lewiston; a 1.2-mile-long 345-kilovolt transmission line from the converter station to the Larrabee Road Substation also in Lewiston; and the two termination stations for the horizontal directional drill on either side of the Kennebec River.

Portions of the project remaining in CMP ownership include transmission line Segments 4 and 5, the new Fickett Road Substation, the Larrabee Road Substation, the Coopers Mills Substation, the Crowley's Substation, the Maine Yankee Substation, the Surowiec Substation, and the Raven Farm Substation.

A. Appeal and Procedural Background

On January 4, 2021, NRCM filed a request with the Board to vacate the December 4, 2020 Transfer Order, and in the alternative, appealed the Transfer Order to the Board. NRCM also requested that the Board stay the Transfer Order during the pendency of the appeal, requested that the Board consolidate the appeal of the transfer with the appeals of the Department Order, and requested a hearing before the Board on the appeal of the transfer.

[22] The Permit-by-Rule Notification (PBR #71019) under the NRPA was accepted by the Department on October 13, 2020. While acceptances of permit by rule notifications may be appealed pursuant to Chapter 2, § 24, no appeal of the Department's acceptance of the PBR was filed.

By letter dated January 19, 2021, the Board Chair notified NRCM that "[t]he Board's authority to vacate a Commissioner licensing decision lies within the context of an appeal" and accepted NRCM's filing as an appeal of the Transfer Order. The Board Chair granted the consolidation request and consolidated NRCM's appeal of the Transfer Order with the three appeals of the Department Order. The Board denied the request for a stay.

NRCM argues in its appeal that the Transfer Order is invalid because the transfer application involves a project of statewide significance and that the Board should have made the original decision on the transfer application, as opposed to the Commissioner; that NECEC LLC does not have sufficient TRI in the public reserved lands in Segment 1 for the transfer application to be accepted as complete and processed; and that NECEC LLC has not provided sufficient evidence of financial capacity to fund decommissioning.

On February 18, 2021, CMP and NECEC LLC filed a response to NRCM's appeal of the Transfer Order and requested that the Board deny the appeal. Also, on February 18, 2021, West Forks submitted a response in support of the NRCM appeal.

NRCM was a party to the original licensing proceeding, and the Board finds that NRCM has demonstrated it is an aggrieved person as defined in Chapter 2, § 1(B), for the purpose of the standing requirement for an appeal of the Transfer Order, as set forth in Chapter 2, § 24.

B. Applicable Standards for License Transfers

Licenses are non-transferable unless the Department approves the transfer. Pursuant to Chapter 2, § 21(C) of the Department's rules, a transferee "shall demonstrate to the Department's satisfaction the technical and financial capacity and intent to: (a) comply with all terms and conditions of the applicable license, and (b) satisfy all applicable statutory and regulatory criteria."

C. Jurisdiction Over Transfer Application

NRCM's initial argument in its January 4, 2021 appeal is that the Transfer Order is invalid because the underlying NECEC project is a project of statewide significance and the Board was required to assert original jurisdiction over the application for the transfer. Therefore, NRCM contends, the Commissioner did not have the authority to consider the transfer application.

When the transfer applications were filed, NRCM requested, by letter dated October 7, 2020, that the Board assume jurisdiction over the transfer application and consolidate the initial decision with the pending appeals of the May 11, 2020 Department Order. By letter dated October 27, 2020, the Board Chair noted that the Board's rules do not expressly provide for consolidation of these two different types of proceedings, and he found no compelling grounds to consolidate the transfer application with the appeals and declined to do so. NRCM's October 7, 2020 letter was treated as a request that the Commissioner refer the transfer application to the Board for assumption of jurisdiction. The Acting Commissioner, by letter dated November 13, 2020, determined that the transfer application did not meet the criteria for Board jurisdiction. That letter was provided to the Board along with a copy of NRCM's October 7, 2020 request,

pursuant to Chapter 2, § 17(B). The request and the Acting Commissioner's response were raised at the November 19, 2020 Board meeting during the Executive Analyst's Comments. As reflected in the minutes, at the meeting, no Board members indicated they wanted to schedule time at a future meeting to discuss the Acting Commissioner's determination or to discuss the Board assuming original jurisdiction of the transfer application. The Board took no action to assume jurisdiction over the transfer application. On December 4, 2020, the Acting Commissioner issued the Transfer Order.

On the question of whether the Commissioner erred by not recommending that the Board take original jurisdiction or the Board erred by not assuming original jurisdiction, the Board finds that the applicable statute and regulation do not compel original jurisdiction here. None of the four criteria for a project of statewide significance set forth in 38 M.R.S. § 341-D(2) and Chapter 2, § 17(C) are met regarding the transfer application. Chapter 2, § 17(C) reads as follows:

> The Board shall assume jurisdiction over and decide each license application that in its judgment represents a project of statewide significance. A project of statewide significance is a project that meets at least 3 of the following 4 criteria:
>
> (1) Will have an environmental or economic impact in more than one municipality, territory, or county;
> (2) Involves an activity not previously permitted or licensed in the State;
> (3) Is likely to come under significant public scrutiny; and
> (4) Is located in more than one municipality, territory or county.

For a transfer application, the focus is the proposed transferee and its financial and technical capacity, and its intent to comply with the license and with regulatory criteria. The focus is not the underlying project. Regarding the first and second criteria, the proposed transfer is administrative in nature, will not itself have environmental or economic impacts, and does not involve a type of activity (i.e., license transfer) that has not been previously licensed. As to the third criterion, the proposed transfer was required by a stipulation agreed to during the Maine PUC process. Only two comments were submitted on the transfer application, and while NRCM has filed the instant appeal of the Transfer Order, the proposed transfer has not come under significant public scrutiny. Lastly, the proposed transfer is administrative in nature, concerning mostly legal and financial responsibility, and is not something that occurs in multiple towns or counties. In sum, the Board's judgment is that the proposed transfer, as set forth in the transfer application, is not a project of statewide significance. The Board finds that the Commissioner had authority to consider and decide the transfer application.

D. Title, Right or Interest

Pursuant to Chapter 2, § 11(D), "an applicant shall demonstrate to the Department's satisfaction sufficient title, right or interest in all of the property that is proposed for development or use." Sufficient TRI must be maintained throughout the entire application processing period. When TRI is based on a lease on the property, "[t]he lease . . . must be of sufficient duration and terms, as determined by the Department, to permit the proposed construction and reasonable use of the

property, including reclamation, closure and post closure care, where required." Chapter 2, § 11(D)(2). While sufficient TRI is required for the Department to process an application, TRI is not a substantive licensing criterion.

In support of the application for partial transfer, NECEC LLC submitted a Transfer Agreement between CMP and NECEC LLC. The Transfer Agreement describes the specific transfers that will occur from CMP to NECEC LLC and specifies the parcels of land (by deed and lease references) required to construct and operate the parts of the project to be transferred. These include the corridor from Beattie Township to Lewiston (Segments 1, 2, and 3), the 20-acre parcel for the converter station, the land for the transmission line from the converter station to the Larrabee Road Substation, the conservation parcels, and a parcel in Bald Mountain Township for relocation of the Appalachian Trail. Included in the submissions was the Amended and Restated Transmission Line Lease, which was signed on June 15 and June 23, 2020 (2020 Lease) between CMP and the State of Maine, Department of Agriculture, Conservation and Forestry, Bureau of Public Lands (BPL) for property located in West Forks Plantation and Johnson Mountain Township. The subject of the 2020 Lease is a 300-foot-wide transmission line corridor containing 32.39 acres located on public reserved lands. By the terms of the 2020 Lease, it superseded and terminated the 2014 Transmission Line Lease between CMP and BPL. By its terms the 2020 Lease has a term of 25 years and expires in 2045.

The Transfer Agreement also provides for the transfer of the seven Transmission Service Agreements that CMP entered into with Massachusetts utility companies and H.Q. Energy Services (U.S.) Inc. The Transfer Agreement requires CMP to assign and NECEC LLC to accept all third-party vendor and service provider agreements and related assets related to the project at the time of closing. NECEC LLC also submitted a recent Certificate of Good Standing issued by the Delaware Secretary of State.

The Department Transfer Order does not become effective until either CMP or NECEC LLC certifies in writing to the Department that the transaction contemplated by the Transfer Agreement between the parties has occurred.

NRCM, in its appeal of the Transfer Order, makes several arguments regarding title, right or interest. First, NRCM argues that CMP did not have sufficient TRI throughout the permitting process because BPL issued the 2014 Lease to CMP before CMP obtained the required Certificate of Public Convenience and Necessity (CPCN) from the Maine PUC, in violation of 35-A M.R.S. § 3132. NRCM contends that "[w]here, as here, the applicant did not have TRI during the permitting process, a transfer to another entity is inappropriate and should be denied." NRCM raised the 35-A M.R.S. § 3132 issue in its appeal of the May 11, 2020 Department Order, and the Board's discussion and findings are set forth in Section 7 of this Board Order. For the reasons given in that section, the Board rejects the argument that the Department was required to make a legal determination of the validity of the 2014 Lease. To the extent that the 2014 Lease has relevance to the finding of TRI for the transfer application, the Board finds that the Commissioner appropriately and reasonably accepted the decision of another state agency to enter into the 2014 Lease.

Second, NRCM argues that, had the Commissioner independently analyzed TRI, she would have found the 2020 Lease to be unlawful and invalid because BPL issued it without obtaining the constitutionally mandated 2/3 vote of the Legislature for a substantial alteration to public reserved land. NRCM made a similar argument about the 2014 Lease in its appeal of the Department Order, and the Board's discussion and findings are set forth in Section 7 of this Order. For similar reasons to those given in that section, the Board finds that the Department was not required to make a definitive legal determination of the validity of a lease, the decision of a sister agency, in order to find TRI under Chapter 2, § 11(D). The Commissioner appropriately and reasonably accepted the decision of the BPL to enter into the 2020 Lease, and the Board finds that that fully executed lease was sufficient TRI in that portion of the proposed corridor to apply for a license transfer.

As set forth in Section 7 of this Order, the Board takes official notice of the recent Superior Court decision in *Black v. Cutko*, BCDWB-CV-2020-29 (Bus. & Consumer Ct., Aug. 10, 2021, Murphy, J.) (litigation challenging 2014 and 2020 leases) (among other things, vacating the 2020 Lease) currently on appeal to the Maine Law Court. The eventual outcome of the appeal is unknown, but in any event, even if a lease (or other property interest) may be invalidated as a result of litigation after a permit is issued, this does not affect whether an applicant demonstrated to the Department's satisfaction sufficient TRI in the property during the application process for the application to be accepted as complete and processed. Chapter 2, § 11(D) requires that an applicant must maintain sufficient title, right or interest "throughout the entire application processing period." The application processing was complete when the Commissioner decided to grant the application and issued the permit.

Lastly, NRCM in its appeal argues that the 25-year term of the 2020 Lease is of insufficient duration, and therefore inadequate proof of TRI, because three of the Transmission Service Agreements to be transferred to NECEC LLC are for years 21-40 and one of the Transmission Service Agreements is for 40 years, because the expected life of NECEC is 40 years as reflected in the PUC Certificate of Public Convenience and Need, and because closure and post-closure care will be 40 or more years in the future. This argument was not presented in NRCM's November 25, 2020 comments to the Department on the transfer application for the Department to consider and it is therefore waived.

Even if the argument is not waived, the Board rejects the contention that the 25-year lease term is insufficient for the purpose of demonstrating TRI during the application processing period. As discussed in the analysis of this issue under the appeal of the underlying permit, pursuant to 12 M.R.S. § 1852(4), leases of public reserved land for utilities and rights-of-way, including for electric power transmission, may not exceed a term of 25 years. The Board, however, is aware of no statute that prohibits renewal of such leases, whether on the same or different terms. Moreover, regarding NRCM's argument that some of the Transmission Service Agreements have terms up to 40 years, evidence in the record shows that CMP's obligations are to deliver energy to the Massachusetts utilities for 20 years. The Power Purchase Agreements between H.Q. Energy Services (U.S.) Inc. and the Massachusetts utilities are all for 20 years, and the three corresponding Transmission Service Agreements between CMP and the Massachusetts utilities are for 20 years. The remaining four Transmission Service Agreements that extend up to 40 years are between CMP and H.Q. Energy Services (U.S.) Inc., and the Massachusetts utilities are

not parties. These agreements are for available capacity on the transmission line, not for power that CMP is contractually obligated to deliver. While the life of the NECEC project may extend beyond the 20-year contractual commitments with the Massachusetts utilities, the 25-year term of the 2020 Lease is sufficient duration for a showing of TRI given the terms of the contractual commitments with the Massachusetts utilities and given that nothing precludes lease renewal. Also, while decommissioning required in the Department Order could possibly occur more than 25 years from now, the Board finds that nothing prevents the State from renewing the lease to allow for decommissioning, if necessary.

Based on the findings and evidence described above, the Board finds there is sufficient evidence, including the 2020 Lease, in the administrative record to support the Commissioner's finding that NECEC LLC demonstrated sufficient TRI for processing of the transfer application.

E. Financial Capacity

NECEC LLC estimates the cost for the portions of the project being transferred at $727,000,000. The capital cost estimate for the project as a whole is $950,000,000, which includes compliance with permit conditions required during construction. The transfer application indicates that NECEC LLC is a wholly owned subsidiary of Avangrid Networks, Inc. (a Maine corporation), and an indirect wholly owned subsidiary of Avangrid, Inc. (a New York corporation).

The transfer application (in Attachment B) includes a September 24, 2020 letter from the Vice President and Treasurer of Avangrid, Inc. stating that Avangrid, Inc. and Avangrid Networks, Inc. have committed to provide NECEC LLC funding needed to acquire the NECEC project from CMP and for construction and operation of the project as approved. Specifically, the letter provides that Avangrid, Inc. will make equity contributions of up to $1,000,000,000 to Avangrid Networks, Inc., which in turn will make these funds available to NECEC LLC. Also, the letter states that Avangrid, Inc. and NECEC LLC will execute a $500,000,000 revolving loan agreement to provide a source of debt financing to NECEC LLC during construction.

NRCM, in its appeal of the Department's Transfer Order, argues that NECEC LLC has not demonstrated financial capacity. Specifically, NRCM contends that NECEC LLC has not shown that it has the financial capacity to decommission the transmission line in Segment 1 once the line is out of service, which decommissioning is required by the Department Order. NRCM argues that NECEC LLC was required to make this demonstration of financial capacity for decommissioning at the time of the transfer application, and that the Avangrid September 24, 2020 letter is silent on decommissioning. While NRCM included in its November 25, 2020 comments on the transfer application arguments that NECEC LLC failed to demonstrate sufficient financial capacity to comply with all terms and conditions of the applicable license, those comments did not include the specific argument about decommissioning made in NRCM's appeal. Nevertheless, given the general arguments made in NRCM's comments, the Board will address the issue of financial capacity to decommission the transmission line in Segment 1.

The Board finds that NECEC LLC was not required by the Department rules, Chapter 373, § 2 or Chapter 2, § 21(C)(1), to provide specific financial assurance of decommissioning at the time of the transfer application. The Department Order requires a decommissioning plan for Segment 1

to be submitted within one year of the start of commercial operation, and the Order requires that the plan include financial assurance for 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. (See also discussion in Section 3 above on West Forks' appeal of the May 11, 2020 Department Order.) Chapter 2, § 21(C)(1) governing transfers requires the transferee to demonstrate to the Department's satisfaction the financial capacity and intent to comply with all terms and conditions of the applicable license and satisfy statutory and regulatory criteria. The requirement in the Department Order is that the Licensees provide financial assurance with respect to decommissioning in the future, within one year of the start of commercial operation. The permit transfer process does not alter or amend the timing of this requirement. The Board finds that the information contained in the transfer application demonstrates NECEC LLC's intent to comply with the terms and conditions of the Department Order. Given that the Department Order requires a showing of financial assurance for Segment 1 decommissioning costs within one year of the start of commercial operation and the project is not yet in operation, NECEC LLC was not required to provide that specific financial information at the time of the permit transfer in order to demonstrate the financial capacity, required in Chapter 2, § 21(C)(1), to obtain a license transfer. The Board finds that the general financial commitments for the project evident from the Avangrid September 24, 2020 letter are sufficient to demonstrate the financial capacity necessary for the transfer.

The Board finds that the information on financial capacity submitted as part of the transfer application demonstrates commitments by NECEC LLC's parent companies to provide funding for the project as allowed by Chapter 373, § 2(B)(3)(a) of the Department's Rules. The Board finds that NECEC LLC has demonstrated adequate financial capacity to construct and operate the portions of the project to be transferred. The Board also finds that the Transfer Agreement and other information supplied by NECEC LLC as part of its application demonstrates NECEC LLC's intent to comply with all terms and conditions of the applicable licenses and satisfy applicable statutory and regulatory criteria. However, as discussed in Section 15 (E) above, the Board is amending the underlying Department Order and NECEC LLC, as the transferee and one of the Licensees, will be subject to that modification requiring the submission, for review and approval, of financial assurance for the decommissioning of Segment 1.

F. Technical Ability

NECEC LLC provided as part of its transfer application a service agreement to be executed between CMP and NECEC LLC that stipulates that CMP will provide certain services to NECEC LLC. These include the use of CMP personnel and expertise to construct the project. NECEC LLC also submitted resume information for key personnel involved with the project. As required by the transfer agreement between CMP and NECEC LLC, NECEC LLC will retain all third-party contractors that originally designed and permitted the project, and the remainder of the project team as described in the Department Order will remain in place.

NRCM, in the first sentence of the funding section of its appeal, asserts that NECEC LLC has not provided sufficient evidence of technical capacity. NRCM, however, provided no argument

beyond this conclusory phrase in its appeal submittal. An argument raised in a perfunctory manner will not be addressed by the Board.[23]

Based on the information submitted in the application for partial transfer, the Board finds that NECEC LLC has demonstrated adequate technical ability to construct and operate the portions of the project to be transferred including the technical ability to comply with terms and conditions of the Department Order.

G. Request for Hearing on the Appeal of the Transfer Order

In its January 4, 2021 filing appealing the Transfer Order, NRCM requested that the Board hold a hearing on the appeal. West Forks supports NRCM's request. CMP and NECEC LLC oppose the request. Hearings are governed by Chapter 2, § 7 of the Department's rules. Section 7(B) requires that the request must "specify the reasons why a hearing is warranted." Hearings are discretionary unless otherwise required by law. Section 7(B) provides that "[t]he Department will hold a hearing in those instances where the Department determines there is credible conflicting technical information regarding a licensing criterion and it is likely that a hearing will assist the Department in understanding the evidence." NRCM's request does not identify conflicting technical information regarding the criteria for granting a license transfer and does not specify reasons for holding a hearing. NRCM moreover does not explain how a hearing would assist the Board in understanding the evidence. The Board finds that a hearing is not warranted on the appeal and therefore denies the request.

CONCLUSIONS

APPEAL OF DEPARTMENT ORDER

BASED on the above findings of fact, and incorporating the Commissioner's conclusions on uncontested issues, subject to the conditions listed below, the Board makes the following conclusions pursuant to 38 M.R.S. §§ 480-A–480-JJ:

A. The project will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The project will not cause unreasonable erosion of soil or sediment.

C. The project will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

[23] The Board will not address the arguments on technical capability for all aspects of the project including decommissioning that are raised in West Forks' February 18, 2021 "Response in Support of NRCM Appeal of Transfer Order" because appeal issues may only be raised in an appeal, and West Forks did not file an appeal of the Transfer Order. These arguments are not raised in any other party's appeal.

D. The project 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 Licensees comply with the requirements in Sections 10 and the corresponding conditions below.

E. The project will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The project will not violate any state water quality law including those governing the classifications of the State's waters.

G. The project will not unreasonably cause or increase the flooding of the alteration area or adjacent properties

BASED on the above findings of fact, and incorporating the Commissioner's conclusions on uncontested issues, subject to the conditions listed below, the Board makes the following conclusions pursuant to 38 M.R.S. §§ 481–489-E:

H. The Licensee provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards.

I. The Licensee 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 Licensees comply with the requirements in Sections 10 and 13 and the corresponding conditions below.

J. The 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.

K. The development meets the standards for storm water management in 38 M.R.S. § 420-D and the standard for erosion and sedimentation control in 38 M.R.S. § 420-C.

L. The development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur.

M. The Licensee 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.

N. 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.

O. No further project modification or conditions regarding the transmission line's location, character, width, or appearance, beyond what is required by this Board 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.

APPEAL OF TRANSFER ORDER

BASED on the above findings, the Board concludes that the Commissioner properly found sufficient title, right or interest to process the application for partial transfer of the Site Law permit. The Board further concludes, based on the findings described above, that NECEC LLC has provided adequate evidence of financial capacity, technical ability, and intent to comply with all terms and conditions of the applicable permit and satisfy all applicable statutory and regulatory criteria and, therefore, NECEC LLC has satisfied all applicable transfer criteria contained in Chapter 2, § 21(C)(1).

DECISION AND CONDITIONS

THEREFORE, the Board DENIES the requests for a public hearing on the appeals of the Department Order of the NATURAL RESOURCES COUNCIL OF MAINE, WEST FORKS, and NEXTERA ENERGY RESOURCES, LLC. The Board DENIES the appeals of NATURAL RESOURCES COUNCIL OF MAINE, WEST FORKS, and NEXTERA ENERGY RESOURCES, LLC and AFFIRMS but AMENDS the Department's Order #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, dated May 11, 2020, which approved the Site Law and NRPA applications to construct the New England Clean Energy Connect project. The Board amends Sections 7, 10, 13, and 18 and Conditions 12 and 39 of the Department Order, as set forth above and in the conditions below. The Board acknowledges the Commissioner's Suspension Order issued on November 23, 2021, remains in effect at this time.

Further, the Board DENIES the request for a public hearing on the appeal of the Transfer Order of the NATURAL RESOURCES COUNCIL OF MAINE. The Board DENIES the appeal of the NATURAL RESOURCES COUNCIL OF MAINE. The Board AFFIRMS the Department's Transfer ORDER #L-27625-26-K-T, dated December 4, 2020, which approved the partial transfer of the Department Order, including the portions related to the following components of the NECEC project: the HVDC line from Beattie Township to Lewiston, the Merrill Road Converter Station, a 1.2-mile-long, 345-kilovolt transmission line from the converter station to the Larrabee Road Substation in Lewiston, and the two termination stations associated with the horizontal directional drilling on either side of the Kennebec River.

This affirmation of the Department's Orders is SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards:

1. All other Findings of Fact, Conclusions, and Conditions remain as approved in Department Orders #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 and #L-27625-26-K-T, and subsequent orders, and are incorporated herein.

2. Prior to the first vegetation maintenance cycle and at least every three years thereafter, the Licensees must collect lidar data for Segment 1. The data must enable evaluation of vegetation height and canopy closure within each progressively taller tapered zone and within each Wildlife Area. The initial lidar data set for Segment 1 capturing conditions prior to the first vegetation maintenance cycle must be collected on or after June 1, 2021.

3. After the initial lidar data set is collected, the Licensees shall identify on GIS maps submitted to the Department the following: those areas within the tapers of Segment 1 and within the Wildlife Areas in which vegetation taller than the minimum height required may be maintained (e.g., as a result of topography, conductor sag, and project design). These maps shall be incorporated into the VMP and vegetation taller than the minimum requirements shall be maintained in these areas.

4. The Licensees shall include in their VMP the steps that will be taken to manage each Wildlife Area with a 35-foot minimum vegetation height to maximize the closed canopy conditions and avoid growth of even-aged stands. The VMP must include the quantitative metrics that will be used to evaluate whether a well-distributed stand of trees is growing and to identify (a) when removal of vegetation less than the 35-foot height minimum and (b) when the planting of vegetation is appropriate to promote growth of a well-distributed stand.

5. After vegetation is removed and once the subsequent set of lidar data is collected, the Licensees shall provide the Department with GIS maps indicating where the vegetation was removed, along with a pre- and post-vegetation removal analysis that evaluates vegetation height, identifies any canopy openings within any Wildlife Area greater than 2,500 square feet, and describes the composition of the stand. The analysis shall be submitted to the Department within 90 days of collection of the lidar data. If the analysis indicates natural regeneration will not result in a closed canopy within five years of the most recent vegetation removal, the Licensees shall submit a replanting plan to the Department for review as part of the submitted analysis. The vegetation to be replanted shall be native species and be of such a size and in such quantity and, if necessary, actively managed to ensure that it will result in a closed canopy within five years of the vegetation having been removed.

6. At least two months prior to each vegetation maintenance cycle, the Licensees shall provide the Department with GIS maps indicating where vegetation will be removed in

accordance with the VMP, along with a narrative description of what vegetation will be removed.

7. The Licensees shall include in their VMP provision that if lidar data indicates that there is an opening in the canopy in excess of 2,500 square feet within a Wildlife Area, exclusive of access roads and structure pads, the Licensees shall replant those areas with native tree species if natural regeneration will not achieve a closed canopy within five years of the vegetation having been removed.

8. The Licensees must submit the revised VMP to the Department for review at least four months prior to the start of commercial operation.

9. Within 120 days of the date of this Order, the Licensees shall submit a decommissioning plan to the Department, for review for Segment 1. The decommissioning plan must demonstrate financial assurance for the decommissioning and identify triggers for when decommissioning will commence. In addition to the requirements in the Department Order pertaining to decommissioning, termination of the current contracts similarly must be identified in the plan as triggering the requirement to begin decommissioning within 18 months of termination of the contracts. In addition, if construction has not resumed on the project within 24 months of the date of this Order, decommissioning must commence.

10. The Conservation Plan required by Special Condition 39 of the Department Order is amended to require permanent conservation of 50,000 acres in the vicinity of Segment 1.

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 21st DAY OF JULY 2022.
BOARD OF ENVIRONMENTAL PROTECTION

BY: _____
Mark C. Draper, Presiding Officer
As designated by Susan M. Lessard, Chair

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: August 2021 **Contact: (207) 314-1458**

SUMMARY

This document provides information regarding a person's rights and obligations in filing an administrative or judicial appeal of a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner.

Except as provided below, there are two methods available to an aggrieved person seeking to appeal a licensing decision made by the DEP Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) 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. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

A person filing an appeal with the Board should review Organization and Powers, 38 M.R.S. §§ 341-D(4) and 346; the Maine Administrative Procedure Act, 5 M.R.S. § 11001; and the DEP's *Rule Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

Not more than 30 days following the filing of a license decision by the Commissioner with the Board, an aggrieved person may appeal to the Board for review of the Commissioner's decision. The filing of an appeal with the Board, in care of the Board Clerk, is complete when the Board receives the submission by the close of business on the due date (5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board, as determined by the received time stamp on the document or electronic mail). Appeals filed after 5:00 p.m. on the 30th calendar day from which the Commissioner's decision was filed with the Board will be dismissed as untimely, absent a showing of good cause.

HOW TO SUBMIT AN APPEAL TO THE BOARD

An appeal to the Board may be submitted via postal mail or electronic mail and must contain all signatures and required appeal contents. An electronic filing must contain the scanned original signature of the appellant(s). The appeal documents must be sent to the following address.

Chair, Board of Environmental Protection
c/o Board Clerk
17 State House Station
Augusta, ME 04333-0017
ruth.a.burke@maine.gov

The DEP may also request the submittal of the original signed paper appeal documents when the appeal is filed electronically. The risk of material not being received in a timely manner is on the sender, regardless of the method used.

At the time an appeal is filed with the Board, the appellant must send a copy of the appeal to: (1) the Commissioner of the DEP (Maine Department of Environmental Protection, 17 State House Station, Augusta, Maine 04333-0017); (2) the licensee; and if a hearing was held on the application, (3) any intervenors in that hearing proceeding. **Please contact the DEP at 207-287-7688 with questions or for contact information regarding a specific licensing decision.**

REQUIRED APPEAL CONTENTS

A complete appeal must contain the following information at the time the appeal is submitted.

1. *Aggrieved status*. The appeal must explain how the appellant has standing to bring the appeal. This requires an explanation of how the appellant 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.* The appeal must identify the specific findings of fact, conclusions of law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing criteria that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license to changes in specific license conditions.
5. *All the matters to be contested*. The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for hearing must be filed as part of the notice of appeal, and it must include an offer of proof regarding the testimony and other evidence that would be presented at the hearing. The offer of proof must consist of a statement of the substance of the evidence, its relevance to the issues on appeal, and whether any witnesses would testify. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed supplemental evidence must be submitted with the appeal. The Board may allow new or additional evidence to be considered in an appeal only under limited circumstances. The proposed supplemental evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Requirements for supplemental evidence are set forth in Chapter 2 § 24.

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, and is made accessible by the DEP. Upon request, the DEP will make application materials available to review and photocopy during normal working hours. There may be 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 the appeal.* DEP staff will provide this information upon request and answer general questions regarding the appeal process.

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. Unless a stay of the decision is requested and granted, a licensee may proceed with a project pending the outcome of an appeal, but the licensee 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 acknowledge receipt of an appeal, and it will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials admitted by the Board as supplementary evidence, any materials admitted in response to the appeal, relevant excerpts from the DEP's administrative record for the application, and the DEP staff's recommendation, in the form of a proposed Board Order, will be provided to Board members. The appellant, the licensee, and parties of record are notified in advance of the date set for the Board's consideration of an appeal or request for a hearing. The appellant and the licensee will have an opportunity to address the Board at the Board meeting. The Board will decide whether to hold a hearing on appeal when one is requested before deciding the merits of the appeal. The Board's decision on appeal may be to affirm all or part, affirm with conditions, order a hearing to be held as expeditiously as possible, reverse all or part of the decision of the Commissioner, or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the licensee, and parties of record of its decision on appeal.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and 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. 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. § 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 Clerk at 207-287-2811 or the Board Executive Analyst at 207-314-1458 bill.hinkel@maine.gov, or for judicial appeals contact the court clerk's office in which the appeal will be filed.

Note: This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, is provided to help a person to understand their rights and obligations in filing an administrative or judicial appeal. 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.

EXHIBIT D

PIERCE ATWOOD LLP

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May 9, 2025

VIA MELS PORTAL

Ms. Dawn Hallowell
Maine Department of Environmental Protection
Bureau of Land Resources
17 State House Station
Augusta, ME 04333-0017

Re: Condition Compliance Submission for Condition #39 of Maine Department of Environmental Protection Site Location/NRPA Permit Numbers #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 and for Condition #10 of the Maine Board of Environmental Protection Permit Numbers L-27625-26-F-Z, L-27625-TG-G-Z, L-27625-2C-H-Z, L-27625-VP-I-Z, L-27625-IW-J-Z, L-27625-26-AB-Z for the New England Clean Energy Connect Project

Dear Ms. Hallowell:

On behalf of NECEC Transmission LLC, please find enclosed a revised Conservation Plan in compliance with Condition #39 of the May 11, 2020 Maine Department of Environmental Protection Order and Condition #10 of the July 21, 2022 Maine Board of Environmental Protection Order for the New England Clean Energy Connect Project.

Please let me know if you have any questions.

Sincerely,

Lisa A. Gilbreath

Enclosures
cc: DEP/LUPC Service List (last updated 2024)
Rob Wood, Director, Bureau of Land Resources

NEW ENGLAND CLEAN ENERGY CONNECT
50,000 ACRE CONSERVATION PLAN

Revised May 9, 2025

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Attachments

Attachment 1: Conservation Easement
Attachment 2: Preliminary Consent
Attachment 3: Draft Forest Management Plan

Executive Summary

On May 11, 2020, the Maine Department of Environmental Protection (MDEP) completed its 29-month application review and issued an Order approving the New England Clean Energy Connect (NECEC) Project Site Location of Development Act and Natural Resources Protection Act permit applications. Special Condition #39 of the MDEP Order requires the development of a Conservation Plan to permanently conserve 40,000 acres in the vicinity of Segment 1 (Beattie Township to The Forks Plantation) to compensate for the fragmenting effect and the related edge effect of the Segment 1 portion of the NECEC on habitat in the region by promoting habitat connectivity and conservation of mature forest areas. The required area to be conserved was increased to 50,000 acres by the Maine Board of Environmental Protection (Board) Order dated July 21, 2022, that affirmed the MDEP Order. Collectively, the MDEP Order and the Board Order are referred to herein as the "Permit Orders."

In compliance with the Permit Orders, this Conservation Plan, along with the accompanying Conservation Easement (CE) and draft Forest Management Plan (FMP), presented by NECEC Transmission LLC (NECEC LLC), along with Weyerhaeuser Company (Weyerhaeuser), conserves more than 50,000 acres of largely contiguous property adjacent to Segment 1 (the Protected Property), to be managed for mature forest and habitat connectivity, including wildlife travel corridors within riparian areas and between mature forest habitats. This will be accomplished by extinguishing development rights and modifying existing silvicultural practices on the property to prioritize mature forest habitat conservation and to create a shifting mosaic of predominantly mature forest blocks, which increase overall mature forest habitat and provide habitat connectivity, and by establishing permanent wildlife travel corridors along riparian areas. Compared to current management practices, the proposed intensive conservation management described in the CE will result in an increase from 40% in the 35+ foot age class and 13% in the 50+ foot age class today, to 65% in the 35+ foot height class and 50% in the 50+ foot age class by 2065. Achieving 50% in the 50-foot age class by 2065 and thereafter in perpetuity represents a substantial change in management practices, and a substantial improvement in wildlife habitat that will endure beyond the life of the NECEC Project.

Among many natural resource attributes, the area to be conserved includes and protects blocks of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitat. Habitat and important habitat features for a wide variety of species is abundant, as are large areas of otherwise developable land that will be protected in perpetuity under the proposed CE.

In addition to establishing perpetual conservation of mature forest and habitat connectivity, the unique location of this conservation parcel creates a sweeping landscape of surrounding conserved land, including Leuthold Forest Preserve (16,934), Moose River/#5 Bog Conservation easement (4,790-acres) and the Attean Pond Conservation Easement (20,000 acres) to the northwest, the Cold Stream Public Land Unit (8,150-acres) running north and south directly through the protected property, and the Moosehead Conservation Easement (355,449-acres) to the east and north. In other words, the more than 50,000 acres subject to this Conservation Plan is strategically located to connect almost 450,000 acres of contiguous conserved habitat.

The Permit Orders require the conserved land to be "in the vicinity of Segment 1." By working closely with Weyerhaeuser and in consultation with Maine's natural resource agencies, NECEC LLC has acquired for the State rights to key parcels at the center of the conservation footprint in this region. Like the final pieces

in a puzzle, these more than 50,000 acres serve as a force multiplier to improve, maintain, and conserve wildlife habitat and habitat connectivity within and beyond the conservation parcel boundaries.

1.0 Introduction and Background

The Permit Orders require NECEC LLC to identify a total of 50,000 acres, in blocks of not less than 5,000 acres unless adjacent to existing conserved land or otherwise uniquely appropriate to the goals of the Conservation Plan, for conservation via a legal interest such as fee ownership or a conservation easement. In addition, in response to agency and stakeholder input, NECEC LLC prioritized areas adjacent to conserved land and those with existing mature forest habitat.

To fulfill the requirements of the Conservation Plan, NECEC LLC needed to identify land that satisfied the above criteria and a landowner willing to agree to implement new and explicit conservation management regimes in perpetuity. NECEC LLC utilized publicly available information and technology as part of the habitat block evaluation processes, compiling tract boundaries and acreages, ownership interests, and current and past land uses.

This level of analysis revealed a target area of approximately 2.9 million acres, with 47 distinct large landowners. Weyerhaeuser emerged as a strong conservation partner, and within their ownership of over 800,000 acres in Maine, there were multiple connected parcels in the vicinity of and, in fact, surrounding Segment 1 and bordered by existing conserved land.

The Conservation Plan has a primary goal of promoting habitat connectivity and conservation of mature forest areas. The term "mature forest" is not defined in the Permit Orders, but there is ample evidence in the record to support a threshold condition of those forest stands that achieve a minimum height of 35 feet. Testimony was offered that pine marten, an umbrella species, preferred habitat with trees at least 30 feet tall.[1] The MDEP stated that, based on its review of the evidence in the record, taller vegetation, with a minimum height of 35 feet, is appropriate to support wildlife.[2] In considering the minimum vegetative height in certain Wildlife Areas,[3] the Board found that "the maintenance of taller vegetation in Wildlife Areas further reduces the fragmenting impact of the Segment 1 on wildlife habitat and promotes connectivity."[4] Despite the consistent reference to this 35-foot height in the record, this Conservation Plan introduces protections beyond this minimum height for mature forest. Through consultations with Maine Bureau of Parks and Lands (BPL), Maine Natural Areas Program (MNAP), and the Maine Department of Inland Fisheries & Wildlife (MDIFW), a threshold of 50 feet or greater height with a basal area of 60 square feet of native trees species was agreed upon as the definition of Mature Forest habitat.

This Conservation Plan is just one of multiple preservation, mitigation, and compensation measures required by the Permit Orders, which include measures related to coldwater fisheries, inland waterfowl and wading bird habitat, significant vernal pools, winter habitat and travel corridors for deer, and recreational uses, among other measures and financial commitments that ensure the Project has no unreasonable impact on natural resources. These are described more thoroughly in MDEP Order Sections

[1] MDEP Order at 78; see also Board Order at 53.
[2] MDEP Order at 79, 90; see also Board Order at 42-44, 49.
[3] The MDEP 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." MDEP Order at 4, n.3; see also id. at Appendix C.
[4] Board Order at 53.

5.D, 6, and 7.D; MDEP Order Appendices C and F; and Board Order Section 10.B(5)-(8). As required by the Permit Orders, this Conservation Plan focuses solely on compensation for the fragmenting effect of the transmission line on habitat in the region of Segment 1 and the related edge effect.

2.0 NECEC Permit Orders and Conditions

The issuance of the MDEP Order followed a 29-month regulatory review, which included six days of evidentiary hearings and two nights of public testimony. The issuance of the Board Order followed an appeal that spanned more than two years, during which the Board heard argument from appellants on impacts to wildlife, fisheries, and other natural resources, including more specifically habitat fragmentation and wildlife travel corridors. This extensive analysis by these agencies resulted in final Permit Orders that exceed 300 pages.

The MDEP required development of the Conservation Plan, as well as the associated CE and FMP, specifically and explicitly to address habitat fragmentation as set forth at Section 7.D.(2)(a)(3) of its Order. Other minimization measures addressing habitat fragmentation include vegetation management strategies and construction modifications, such as tapering of vegetation and taller poles and vegetation requirements, as set forth at MDEP Order Section 7.D.(2)(a)(1)-(2). The MDEP required other preservation, mitigation, and compensation measures to address impacts to other natural resources, including Significant Vernal Pools and Other Significant Wildlife Habitat; Brook Trout and Coldwater Fisheries; Deer Wintering Areas; Threatened and Endangered Species Habitat; Wetlands and Waterbodies; and Unusual Natural Areas. Avoidance, minimization, and mitigation of impacts to these resources are addressed elsewhere in the MDEP Order.

As set forth in MDEP Order Sections 5.D, 6, and 7.D; MDEP Order Appendices C and F; Board Order Section 10.B(5)-(8); and the 350+ page Compensation Plan approved by the MDEP, the full package of MDEP avoidance, minimization, and mitigation requirements includes, but is not limited to:

- Maintaining full height, tapered, and taller vegetation within the Segment 1 transmission line corridor as outlined in Appendix C
- Maintaining deer travel corridors in the locations identified in Table C-1
- Leaving trees that have been cut during routine maintenance
- Maintaining 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
- Maintaining 75-foot riparian filter areas on all other streams
- Conserving 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
- Conserving 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
- Conserving 717 acres of land within the Upper Kennebec River DWA and providing 10 travel corridors within this DWA
- Time of year construction limitations/prohibitions in mapped habitat for wood turtles and Rusty Blackbird
- Contributing $877,010.06 to the ILF program for unavoidable impacts to SVPs ($623,657.53) and IWWHs ($253,352.53), and contributing $649,771.95 to Maine Endangered and Nongame Fund for impacts to RBM and NSS ($469,771.95) and riparian buffers ($180,000.00)

- Contributing $1,875,000 for replacement of culverts blocking fish passage
- Contributing $1,234,526.82 to the Maine Natural Areas Conservation Fund for impacts to Goldie's Wood Fern and the Jack Pine Forest

Each of these MDEP mandates is in addition to the conservation of 50,000 acres required by the Permit Orders. The Conservation Plan therefore need not address Project impacts to, for example, fisheries, wetlands, and unusual natural areas because compensation for impacts to those natural resources are addressed elsewhere in the Permit Orders. Collectively, the MDEP and the Board found these measures ensure that the Project will not unreasonably impact natural resources. The Board concluded:

> The Board finds that this [50,000-acre] amount adequately compensates for the impacts of the project on wildlife habitat, including habitat fragmentation. Further, and overall, the Board finds that with the requirements in the Department Order, along with the added requirements related to vegetation management and tapering within Segment 1 described above, the impacts of the project on wildlife and wildlife habitat will be adequately minimized and compensated for. The Board finds that, under the terms and conditions approved in this Board Order, wildlife lifecycles and wildlife habitat are adequately protected from adverse effects from the project, as required pursuant to Chapter 375, § 15.

In other words, this Conservation Plan is just one component of a comprehensive impact avoidance, minimization, mitigation and compensation set of requirements conditioned by the MDEP, each of which addresses a particular impact. The "primary goal" that the MDEP established for the Conservation Plan is "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." The MDEP and the Board on appeal determined that these preservation, mitigation, and conservation measures, collectively, allow for the protection of wildlife and fisheries, unusual natural areas, significant wildlife habitat, and freshwater wetlands.

2.1 Permit Orders' Conservation Requirement

The NECEC Project Segment 1 is an approximately 53.1-mile long transmission line that starts at the Maine/Quebec border in Beattie Township and continues to The Forks Plantation. The Project then continues to the point of interconnection with the New England grid in Lewiston, providing 1,200 MW of clean energy to New England.

MDEP Order Special Condition #39 states that the Permittee[5] must develop and submit to the MDEP, for its review and approval, a Conservation Plan to permanently conserve 50,000 acres (formerly 40,000 acres) in the vicinity of Segment 1. The MDEP Order states:

[5] Central Maine Power was granted the original permit by the DEP; the permit was subsequently partially transferred to NECEC Transmission LLC.

> 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 of stewardship funding (e.g., funding for monitoring and enforcement) needed to support achievement of the goals of the Conservation Plan; and
> - Ensure the MDEP 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 addition time, not more than four years from the date of this Order, is needed, the [MDEP] 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 [MDEP] for review and approval.

On appeal of the MDEP Order, the Board affirmed that the conditions set forth in the MDEP Order ensure that the Project will not unreasonably harm (e.g.) brook trout or brook trout habitat, but determined that additional measures were required to address habitat fragmentation and wildlife corridors. For example, the Board ordered NECEC LLC to collect lidar data and submit GIS mapping for Segment 1 that enables evaluation of vegetation height and canopy closure within each progressively taller tapered zone and the identified Wildlife Areas, along with a pre- and post-vegetation removal analysis that evaluates and compares vegetation height and describes the composition of the stand.

The Board also amended Special Condition #39 to increase the conserved acreage from 40,000 acres to 50,000 acres, finding that "this amount adequately compensates for the impacts of the project on wildlife habitat, including habitat fragmentation." Accordingly, the Board conditioned its affirmation of the MDEP Order as follows:

> The Conservation Plan required by Special Condition 39 of the Department Order is amended to require permanent conservation of 50,000 acres in the vicinity of Segment 1.

Special Condition #10 required amendment of the initial Conservation Plan to accomplish conservation of 25% more acreage and resulted in the filing of this revised Conservation Plan for the MDEP's review and approval.

3.0 Conservation Plan

In compliance with the Permit Orders, this Conservation Plan conserves more than 50,000 acres of land in the vicinity of Segment 1. Its primary goal is 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.

3.1 Components of the Conservation Plan

NECEC LLC's overall plan for conservation of 50,000 acres in accordance with the Permit Orders consists of three components: 1) a Conservation Easement; 2) a draft Forest Management Plan; and 3) this Conservation Plan. The CE (at Attachment 1) will be recorded in the Somerset County Registry of Deeds and contains the governing rights and responsibilities that will permanently encumber the Protected Property upon the MDEP's review and approval. The draft FMP is, at the time of filing this Conservation Plan, in the format of a table of contents agreed to by BPL and Weyerhaeuser. With input from MDIFW, BPL and Weyerhaeuser will finalize the FMP for filing with the MDEP on or before July 15.

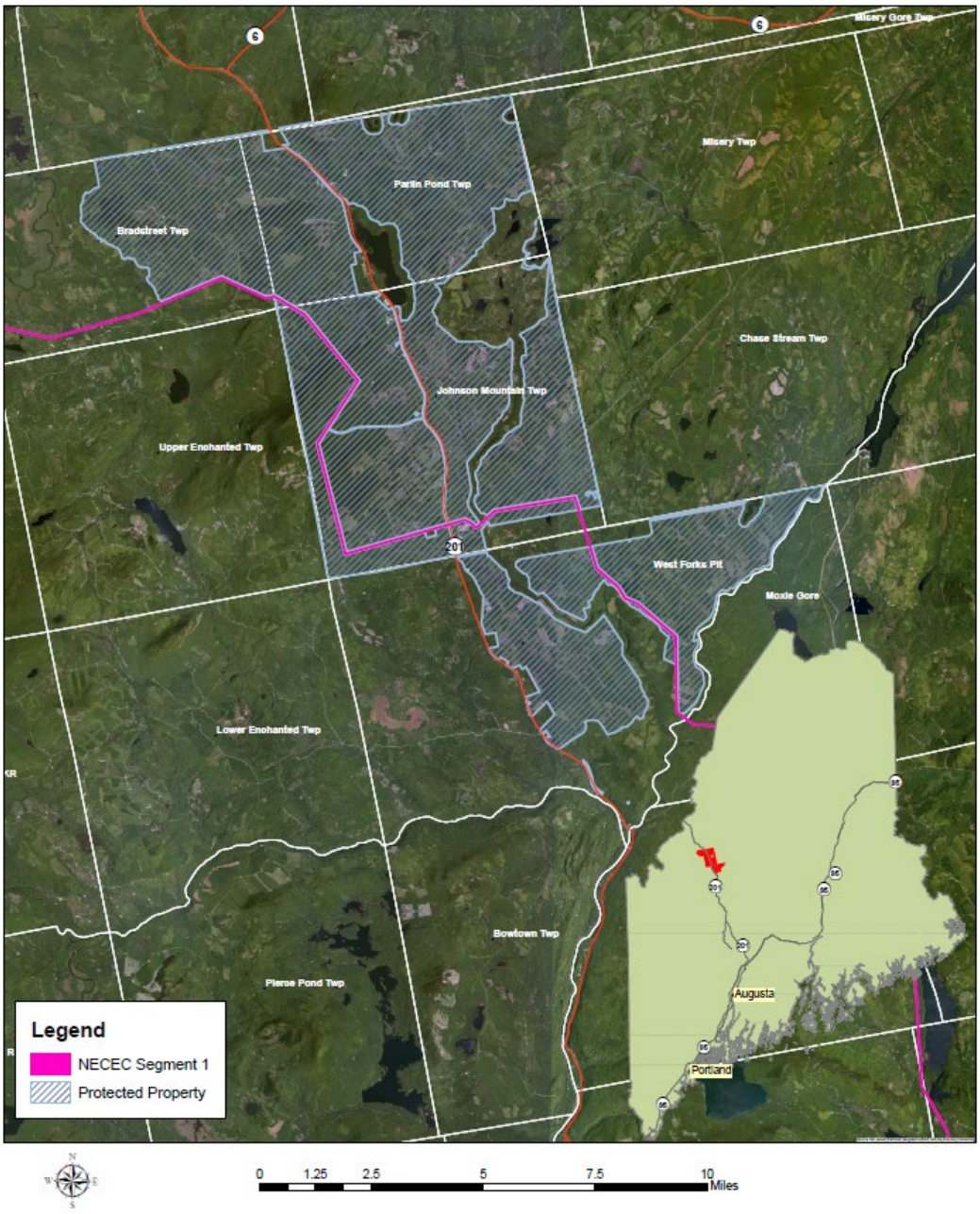
Development of a robust conservation easement followed by a forest management plan that implements the terms of the conservation easement is the BPL's customary procedure for ensuring accurate forest condition documentation for the Protected Property. Accordingly, BPL and Weyerhaeuser have agreed to the terms of the attached CE, and the draft FMP (at Attachment 3) will be developed by those parties. That FMP will be implemented upon MDEP's review and approval. Finally, this Conservation Plan describes in detail how the plan meets the requirements of the Permit Orders.

3.2 Conservation Area

3.2.1 Largely Contiguous Block of 50,000 acres

The Permit Orders require that any conservation area be at least 5,000 acres unless adjacent to existing conserved land. This Conservation Plan greatly exceeds this requirement by conserving one largely contiguous block of approximately 50,063 acres, which itself is surrounded by already-conserved land. The Protected Property is currently under single ownership and is managed under a common forest management regime, which will allow timely and well-coordinated implementation of the conservation measures required by the Permit Orders. The Protected Property is located in Bradstreet Township, Johnson Mountain Township, Parlin Pond Township, and West Forks Plantation. It is immediately adjacent to (i.e., abuts and adjoins) multiple conserved parcels, forming one large sweep of conservation land and connected wildlife travel corridors. Segment 1 of the NECEC bisects the Protected Property, ensuring that any fragmenting or edge effect caused by the transmission line during its operational life is mitigated by establishing the conservation measures described herein in the immediate vicinity of Segment 1 in perpetuity.

Figure 1. Map of the Protected Property[6]



3.2.2 Conservation Value

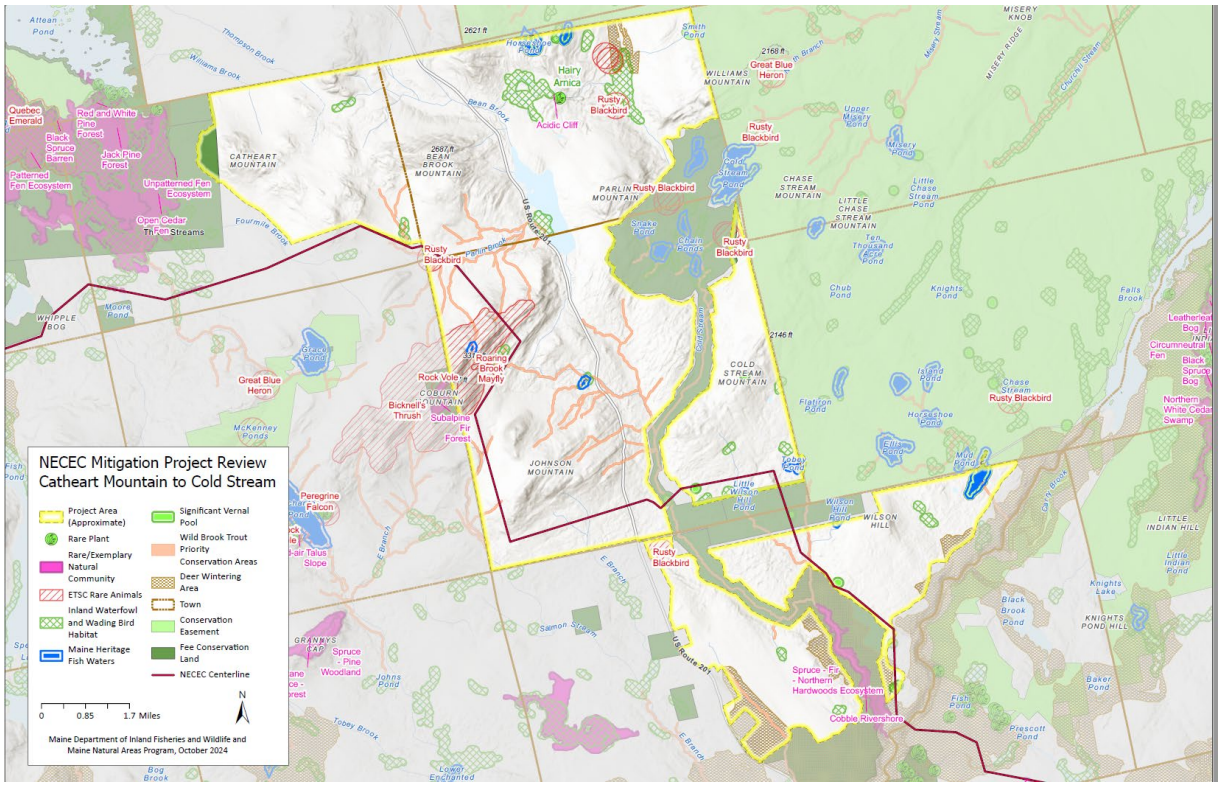
The Protected Property is a forested land area of significant breadth and diversity, with outstanding values including sizeable blocks of mature forest. It is interspersed with upland, riparian, and wetland vegetative communities composed of coniferous, deciduous, and mixed-wood forest of varied age classes with approximately 40% of the area currently 35 feet in height or taller. Large blocks of the property have ecological importance as wildlife and fisheries habitat, including for species that prefer mature forest such

[6] All maps are approximate and subject to confirmation in baseline documentation to be developed with BPL.

as pine marten (*Martes americana*), and white-tailed deer (*Odocoileus virginianus*) as well as brook trout (*Salvelinus fontinalis*), landlocked salmon (*Salmo salar sebago*), other fish, and many species of forest interior dwelling birds, waterfowl, reptiles, and amphibians. The Protected Property includes extensive bogs, wetlands, rivers, an abundance of seasonal and perennial streams, lakes, remote ponds and other water bodies, and unique natural features, all of which will benefit from the overall conservation of the Protected Property. The conservation management described in the FMP would protect, maintain, and enhance the habitat value for these species.

In fact, much of the Protected Property has ecological importance as wildlife and fisheries habitat. MDIFW and MNAP have mapped the locations of special plant or wildlife habitat, including significant wildlife habitats, habitat for rare, threatened or endangered plant and wildlife species, and rare or exemplary natural communities identified in publicly available information that will benefit from the protections afforded under the CE and FMP. These specifically include Inland Waterfowl and Wading Bird Habitat, Maine Heritage Fish Waters, Significant Vernal Pools, and Wild Brook Trout Priority Conservation Areas that will not only benefit from the mature forest management but, importantly, will benefit from the significant protections around perennial streams not commonly found in a working forest easement, described below. Management of the Protected Property as proposed herein will greatly benefit the plant and wildlife habitat, as well as water quality, that would otherwise be impacted by forestry practices allowable under current law and potential future development. Consultations with MDIFW are required under the terms of the CE, which will ensure that plant and wildlife habitat and water quality are considered in the management of the Protected Property in perpetuity.

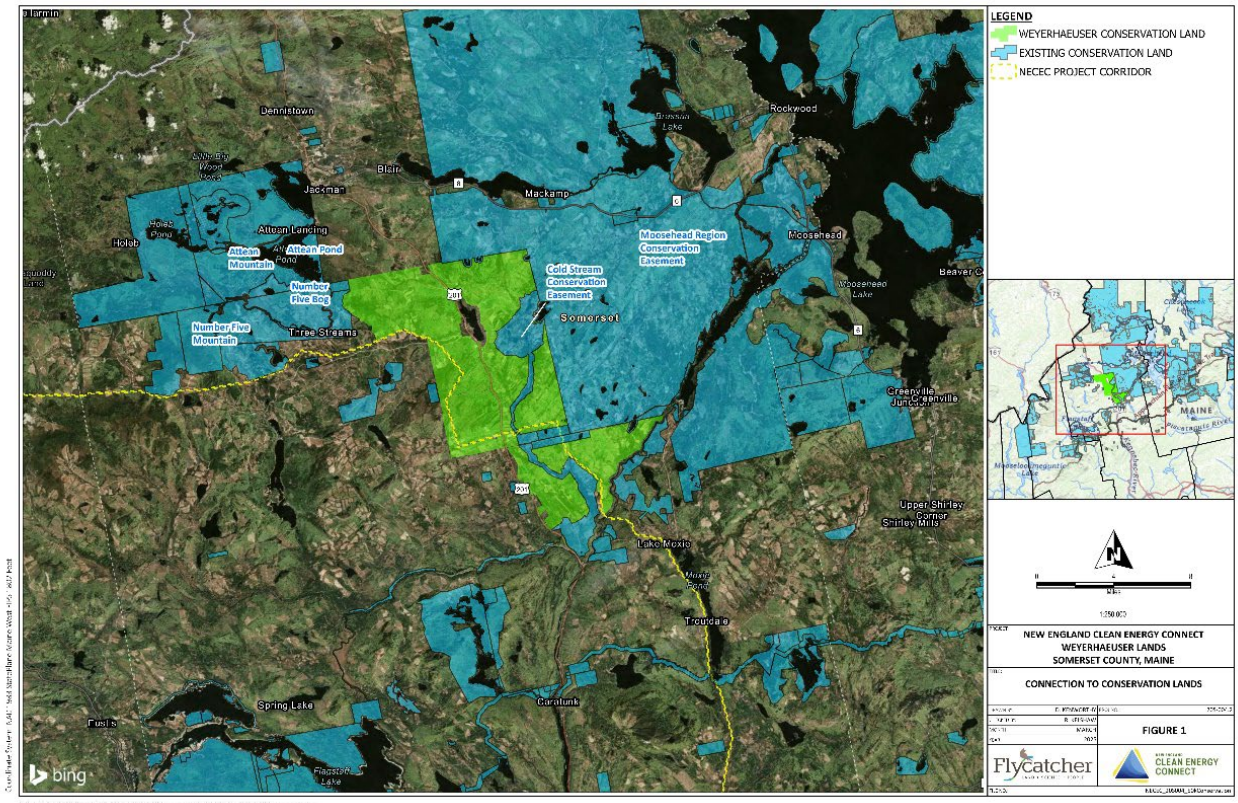
Figure 2. MDIFW and MNAP NECEC Mitigation Project Review



Protecting the property through the CE ensures that development will never adversely impact the ecological benefits of such habitats and their resident species. By preventing residential, commercial, industrial and other traditional development, conservation of the Protected Property under the terms of the CE will ensure the perpetual protection and preservation of its conservation values.

The Protected Property further enhances and extends a large landscape of protected land due to its adjacency to existing conservation lands. A map of the Protected Property and surrounding conserved lands is included below as **Figure 3**. To the northwest is the Leuthold Forest Preserve (16,934 acres), Moose River/#5 Bog Conservation easement (4,790-acres), and the Attean Pond Conservation Easement (20,000 acres); the Cold Stream Public Land Unit (8,150-acres) extends north/south and runs through the Protected Property; and the Moosehead Conservation Easement (355,449-acres) lies to the east and north. The Protected Property fills a conspicuous gap between these areas, creating almost 450,000 contiguous acres in conservation.

Figure 3. Connection to Conservation Lands



3.3 Primary Goal of the Conservation Plan

Currently the Protected Property is managed primarily for the sustainable production of commercial forest products. In contrast, the primary management goal of the Conservation Plan, as reflected in the CE and draft FMP as well as this document, is to compensate 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. How this goal is achieved is described in more detail below.

3.3.1 Mature Forest Management

Under current management standards and state law, forests on the Protected Property are not managed with a goal of producing mature forest habitat and habitat connectivity. Trees under 35 feet in height comprise 60% of the acreage, with only 13% currently taller than 50 feet, and riparian areas may be harvested. Where openings are created, however, natural reforestation occurs and direct planting of seedlings is also selectively applied, providing benefit to wildlife under the sustainable forestry operations across the Protected Property today. The CE provides that the Protected Property will be managed to meet the goals of mature forest areas and habitat connectivity.

Specifically, regarding mature forest conservation, the CE directs conservation management of the Protected Property, which is anticipated to result in 50% of the landscape with 50 foot or taller trees and a minimum basal area of 60 square feet per acre by approximately the year 2065 and thereafter in perpetuity. These target heights and basal areas will be maintained in perpetuity by managing for a dynamic landscape that includes different stages of growth, ages, and composition. As shown on **Figure 4**, under this CE, over the next forty years the percentage of trees over 50 feet in height will increase from approximately 13% today to approximately 50% by approximately 2065. This is a significant increase compared to current conditions as well as what the forest conditions could otherwise look like in 2065 under current management standards, and an incomparable improvement over potential management that adhered strictly to minimum state standards or, alternatively, to development of the property. A visual depiction of current forest heights by age class is included as **Figure 5**, and a visual depiction of forest heights by age class anticipated in 2065 and beyond under the CE is included as **Figure 6**.

Figure 4. Current and expected percentage and acreage of Protected Property in age classes less than 35 feet, over 35 feet, and over 50 feet under present management in 2025 and the management practices described in this Conservation Plan and the accompanying CE in approximately 2065. (Percentages are based on total acreage available for productive growth of forest; acreages are approximate.)

	<35’	≥35’	≥50’
2025	60%	40%	13%
2065	35%	65%	50%

Figure 5. 2025 Forest Heights by Age Class Under Current Management

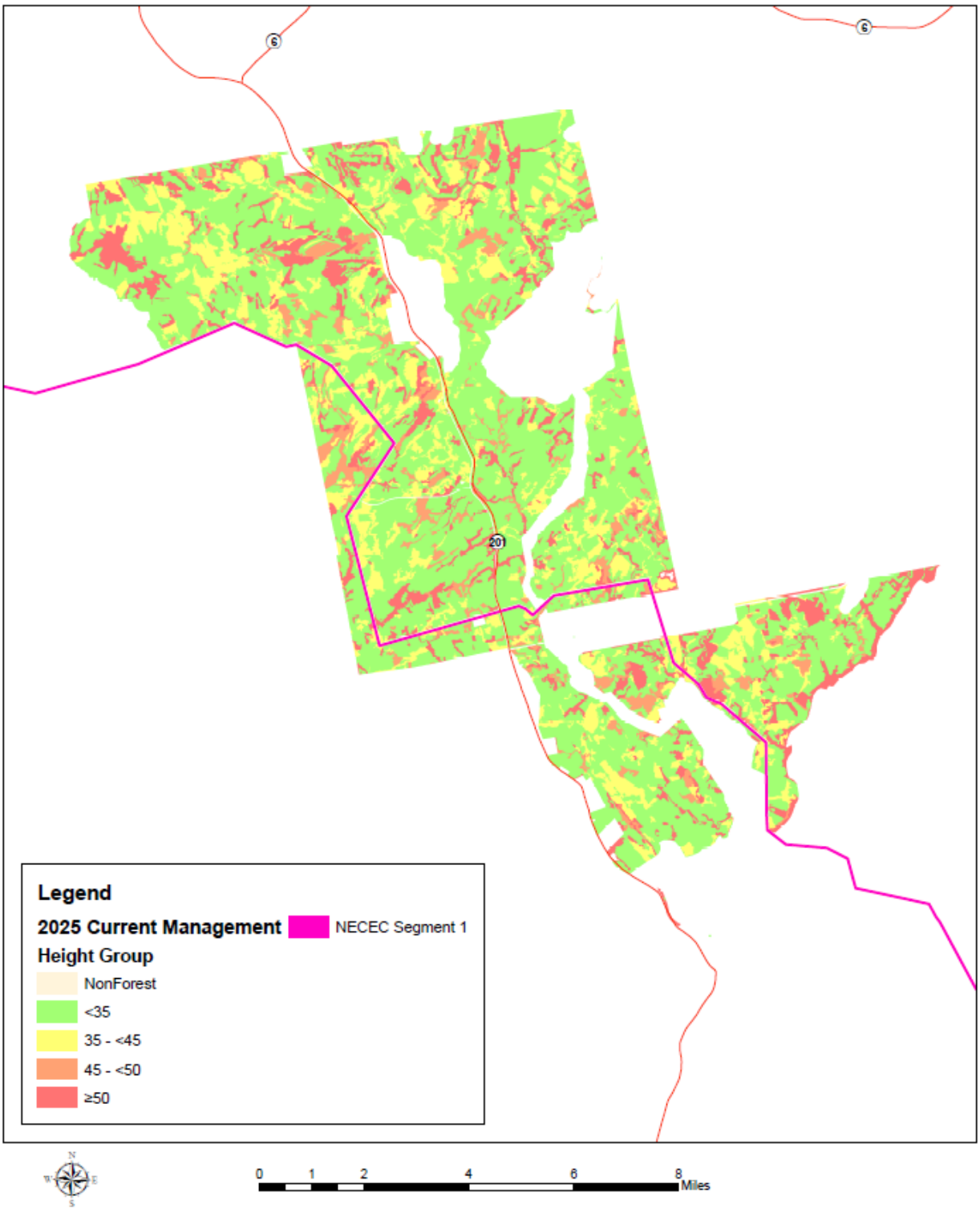
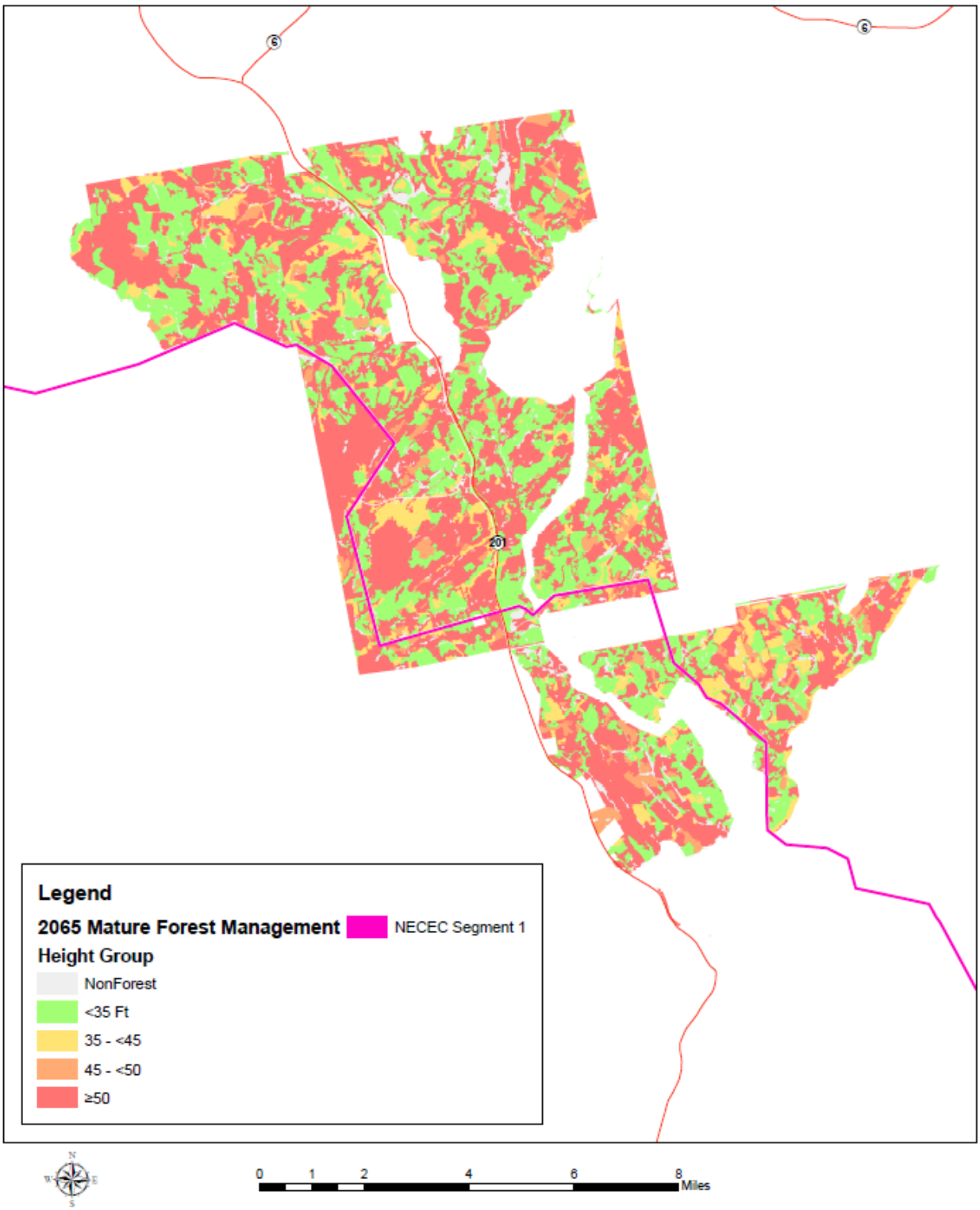


Figure 6. Anticipated 2065 Forest Heights by Age Class Under Proposed Management



3.3.2 Habitat Connectivity, Including Blocks of Habitat and Wildlife Travel Corridors

This Conservation Plan also describes the manner in which ongoing forest management will be conducted to promote habitat connectivity, as more specifically set forth in the CE and the draft FMP. This Conservation Plan provides several unique benefits: 1) it improves habitat connectivity across a large area of western Maine by establishing a contiguous, approximately 450,000-acre area of conserved lands; 2) it substantially increases the prevalence of mature forest habitat blocks, which enables greater habitat connectivity within and between mature forest areas; and 3) it establishes and maintains wildlife travel corridors along riparian areas and between mature forest habitat.

First, implementation of the CE and FMP on the Protected Property enhances and creates full continuity among a large landscape of protected land due to its adjacency to the Leuthold Forest Preserve, the Moose River/#5 Bog Conservation easement, the Attean Pond Conservation Easement, the Cold Stream Public Land Unit, and the Moosehead Conservation Easement.

Second, implementation of the CE and FMP on the Protected Property, by substantially increasing available blocks of habitat for species preferring mature forest habitat, enables greater habitat connectivity within and between mature forest areas. Consistent with the findings by the MDEP[7] and the Board[8], mature forest begins to provide benefits to species preferring mature forest habitat when those forest stands reach 35 feet in height. Forest of at least 35 feet must exist broadly and for a significant duration to meaningfully benefit species preferring mature forest habitat. To provide exceptional, permanent mature forest habitat, this Conservation Plan requires management of 50% of the property to a minimum 50-foot height with a minimum 60 square feet basal area standard comprised of native tree species. By approximately 2065 the terms of the CE would, compared to current management, increase mature forest habitat over 35 feet by almost 12,400 acres and over 50 feet by almost 18,000 acres, to be maintained in perpetuity. This is a departure from current management conditions, fulfilling a central goal of the Conservation Plan to improve habitat connectivity.

To further illustrate the transition to mature forest, by approximately 2065 the expected acreage contained in stands greater than 200 acres having a height class greater than 35 feet would increase from approximately 16,700 acres under the current management regime to approximately 28,400 acres under the CE, and the expected acreage contained in stands greater than 200-acres having a culminative height class greater than 50-feet would increase from approximately 7,750 acres under the current management regime to approximately 18,600 acres under the CE. The exact acreages of forest blocks in these height classes will vary over time but will consistently be significantly higher than would be the case under current management practices. Forests composed of trees at least 35 feet in height support a wide range of wildlife, including umbrella species such as pine marten (*M. americana*). This is consistent with the MDEP Order objective to promote mature forest and habitat connectivity.

Finally, this Conservation Plan establishes and maintains, in perpetuity, wildlife travel corridors along riparian areas and between mature forest habitat by providing significant protections around perennial streams not commonly found in a working forest easement. During the NECEC application review process,

[7] MDEP Order at79. "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…".

[8] Board Order at 53. "While vegetation with a minimum height of 35 feet is not equivalent to full canopy height vegetation in terms of the cover it provides, the record evidence supports that vegetation of 30 feet and taller aids wildlife movement."

the MDIFW advocated for 100-foot riparian filter areas (buffers) around all perennial streams in Segment 1 and all coldwater fisheries streams in the other segments. To extend these protections beyond the Project area and across the Protected Property, the FMP provides a 100-foot no-harvest buffer around perennial streams beginning at the normal high-water line (totaling approximately 2,400 acres), and perpetual management as mature forest habitat from 100 feet to 330 feet from the normal high water line (totaling approximately 4,500 additional acres). Harvesting equipment crossings of these perennial streams will be prohibited, except to construct road or skid trail crossings to facilitate forest management activities, in which case those crossings will be minimized and constructed to protect streambank integrity. The net effect of these measures, totaling approximately 6,900 acres, will be a 660-foot wide wildlife travel corridor on Perennial Streams as identified in the baseline documentation report to be developed by BPL and Weyerhaeuser in conjunction with the FMP. In contrast to the proposed plan, current regulations allow cutting of up to 40% of the total basal area of trees 4 inches or more in diameter in a 10-year period within 75 feet of the bank for streams draining less than 50 square miles and within 100 feet of the bank for streams draining 50 square miles or more. Although the state regulations vary according to drainage classes, for the average perennial stream found in the parcel, current state law only requires maintaining vegetative shade of surface waters with no sediment discharge. This allows harvesting activities up to and directly adjacent to the stream bank. Under the proposed perennial stream buffer requirements of this plan, there will be a 330-foot buffer in place, 100 feet of which will be no harvest and the rest will be managed to meet mature forest habitat as defined above.

Riparian corridors are important wildlife travel pathways for a variety of species, including umbrella species like pine marten (*M. americana*). The MDEP also found that the maintenance of "riparian filters" provide protection for rivers, streams and brooks.[9] The Board Order uses the term "riparian filter areas" as opposed to buffers in recognition that a primary function of these areas will be to shade streams to maintain cold water fisheries and conditions, and to filter sediments and pollutants from the runoff entering streams.[10] The Board noted that riparian corridors "filter sediment and pollutants, stabilize the bank, regulate water temperature by providing shade in the summer and insulation in the winter, attenuate peak flows and help maintain base flows, and provide input of woody debris and other organic matter".[11] The Protected Property includes approximately 88 miles of rivers and perennial streams, representing an extensive network of riparian wildlife travel corridors within the lands to be conserved.

Collectively, the Conservation Plan's contribution to regional connectivity between conserved, undeveloped lands, management of the property to a minimum 50-foot height with a minimum 60 square feet basal area standard for 50% of the productive forest in perpetuity after 2065, and the resulting increase in acreage contained in stands greater than 200-acres having a cumulative height class greater than 50-feet, as well as its creation of protected riparian corridors demonstrate significant benefits to habitat connectivity not seen in other working forest conservation easements. The proposed CE and draft FMP will not only greatly increase the mature forest coverage of the Protected Property by approximately 2065, but will also, for the first time on this property, incorporate the long-term planning for connectivity between these mature forest blocks.

[9] Id., page 96.
[10] Board Order, page 39.
[11] Id., page 48.

3.4 Implementation and Administration

The MDEP Order includes certain requirements pertaining to the implementation and ongoing administration of this Conservation Plan. The sections below describe how those requirements are satisfied in this Conservation Plan.

3.4.1 Legal Interest

NECEC LLC developed the attached CE with BPL and Weyerhaeuser. Once executed, the CE, which would be conveyed by Weyerhaeuser to BPL, will be recorded in the Somerset County Registry of Deeds. The CE, FMP, and this Conservation Plan will ensure that the primary goals of the Conservation Plan are implemented and enforced in perpetuity, well beyond the life of the NECEC.

3.4.2 Holder of the Easement and Qualifications

The BPL is responsible for the management of Public Reserved and Non-reserved Lands, State Parks, Historic Sites, the Allagash Wilderness Waterway, the Penobscot River Corridor, submerged lands, and state-held coastal islands. In addition, the BPL is responsible for protecting public rights and public values on land acquired from private landowners through conservation and public access easements donated to or purchased by the BPL.

3.4.3 Consent of Landowner and Easement Holder

The BPL has given its preliminary consent to be the holder of this CE (at Attachment 2).

3.4.4 Stewardship Funding

NECEC LLC has allocated funds for stewardship of the conservation lands for monitoring and enforcement of conservation plan requirements and to support achievement of CE goals. Appropriate stewardship funding amounts will be calculated, and funds disbursed, to the BPL along with conveyance of the CE for the Protected Property.

3.4.5 Department of Environmental Protection Third-party Enforcement

Pursuant to the MDEP Order, the CE includes MDEP third party enforcement rights.

4.0 Other Benefits of the Conservation Plan

4.1 Protection from Development

The Protected Property, adjacent to so much existing conserved land, will be permanently protected from development. Management of the property, situated along a National Scenic Byway (Old Canada Road), will be exclusively for the obligations established by Special Condition #39, Special Condition #10, and timber management consistent with the primary goal of this Conservation Plan. Without this CE in place, the Protected Property could be subject to impacts from:

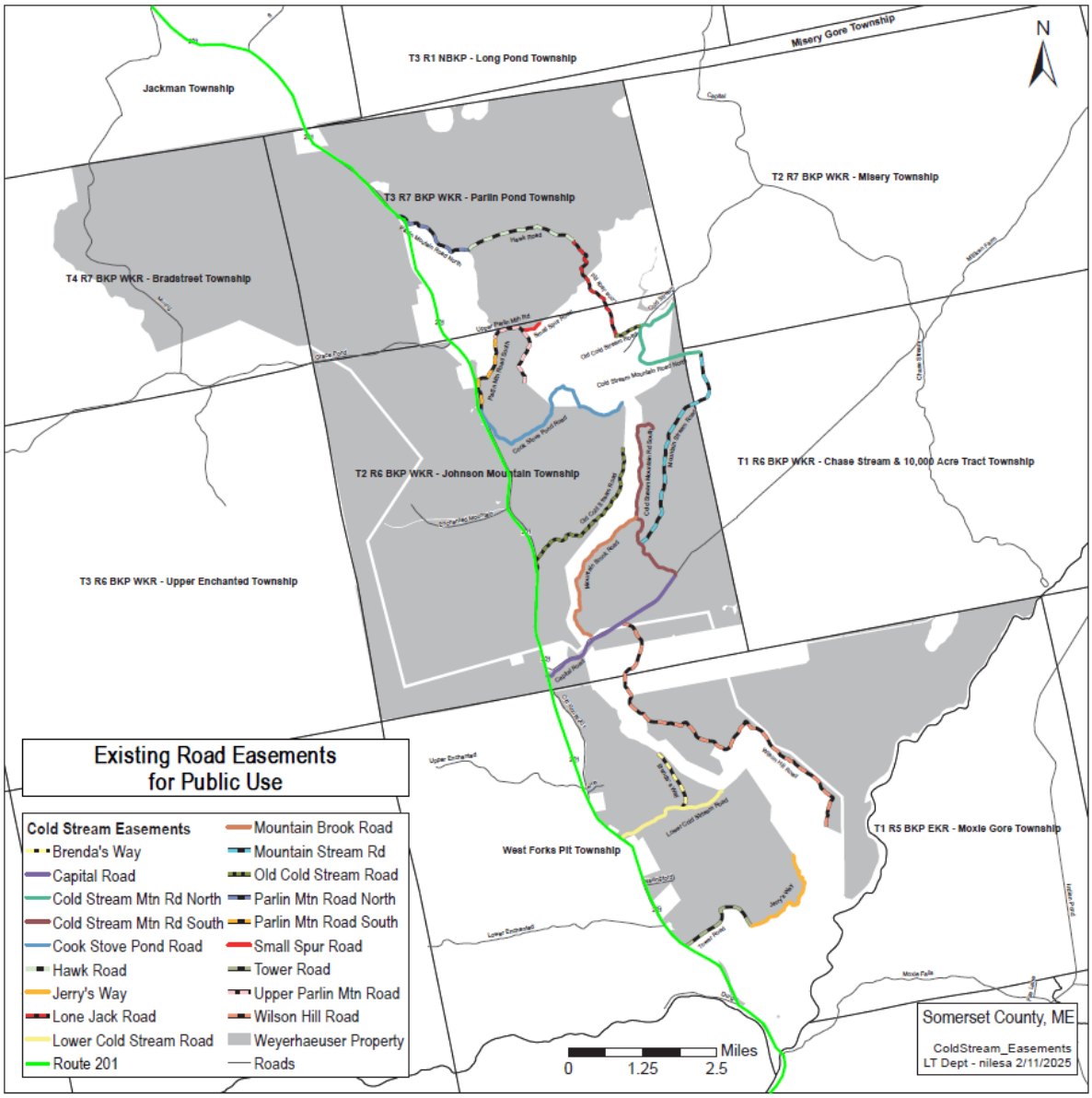
- large scale and intensive residential, commercial, or industrial development;
- seasonal home development along ridgelines and lake, pond, and river shorelines;
- energy development for projects such as solar and wind and associated generator lead lines (i.e., transmission lines necessitated by these generation sources); and
- fragmentation from additional roads, pipelines, transmission lines, and other project proposals.

4.2 Public Access

The CE grants the right of pedestrian access for non-intensive outdoor recreational activities. "Non-intensive outdoor recreational activities" means dispersed, non-commercial, non-exclusive, and non-motorized public recreational activities that do not generally rely on buildings or spectator facilities, such as hunting, fishing, trapping, hiking, nature observation, photography, picnicking, boating, and enjoyment of open space. Such access is subject to reasonable rules and regulations established by Weyerhaeuser to ensure safety during permitted management activities, to permit necessary maintenance, and to preserve the conservation values of the Protected Property.

In addition, the strategic location of the Protected Property incorporates 39.8 miles of permanent road access through and across the Protected Property on 18 rights of way to ensure access to the Cold Stream Forest. A map of those road easements is provided below as **Figure 7**.

Figure 7. Map of Road Easements Across the Protected Property



5.0 Conclusion

This Conservation Plan meets the requirements of the Permit Orders. By working closely with Weyerhaeuser, Maine's natural resource agencies, NECEC LLC will acquire for the State, rights to key parcels at the center of the conservation footprint in this region. Habitat for many species is abundant, as are large developable areas in the vicinity of Segment 1 (and, in fact, on either side of Segment 1) that will now be protected in perpetuity. The CE will be held by a state agency and maintained in perpetuity, even after the transmission line has been decommissioned (thereby obviating any habitat connectivity concerns). NECEC LLC is fully funding the acquisition of this CE and long-term management. The CE will provide enhanced riparian buffers and is designed to create and maintain areas of mature forest.

6.0 Conservation Plan Checklist

50,000 acres; minimum blocks of 5,000 acres; focus on large habitat blocks; in the vicinity of Segment 1	✓ Single 50,000-acre conservation area under one ownership ✓ At the center of and surrounding Segment 1 ✓ Strategic location adjoining nearly 400,000 acres of conserved land ✓ Connects to conservation easement and preserve parcels on the northwest, east, and running through the conservation parcel from north to south
Habitat for species preferring mature forests	✓ Mature forest with trees minimum 50' height and 60 square feet basal area to cover 50% of forested landscape by ~2065 ✓ To be maintained in perpetuity despite limited life of the Project ✓ Results in an increase from 40% to 65% in the 35+ foot age class and 13% to 50% in the 50+ foot age class ✓ Mature forest of native species supports umbrella species and others with similar habitat needs ✓ Habitat supports diverse species of conservation interest – mammals, birds, fish, and insects ✓ Taller vegetation and increase in size of mature forest stands minimizes and mitigates forest fragmentation and edge effect ✓ Represents a substantial change in management practices and in what the conservation area could otherwise look like in 2065

Wildlife travel corridors along riparian areas between mature forest habitat	✓ Perpetual no-harvest buffer of 100' on 88 miles of perennial streams ✓ Perpetual management for mature forest on next 100' to 330' ✓ 660' total wrap-around perennial stream protection ✓ Significant buffer size support riparian filter areas that shade streams, protect stream bank stability, filter sediments, and support coldwater fisheries ✓ Increase in and preservation of mature forest alongside perennial streams maintains, improves, and protects riparian areas functioning as travel corridors ✓ Represents a substantial change in management practices and creates riparian corridor protections in perpetuity
Fee ownership or conservation easement	✓ Conservation easement held by a qualified entity ✓ Development rights relinquished ✓ Unprecedented protective forest management commitments
Preliminary consent from owner or holder	✓ BPL provided preliminary consent to hold the Conservation Easement
Stewardship Funding	✓ Stewardship funds to be calculated and disbursed to the BPL as the Conservation Easement Holder
Third party enforcement rights	✓ Conservation Easement grants enforcement rights to MDEP
Additional conservation benefits	✓ Ceding of development rights protects conservation area in perpetuity from future habitat loss and fragmentation ✓ Connection to conserved parcels extends wildlife travel corridors beyond the Protected Property to adjacent tracts ✓ Public foot access granted in perpetuity ✓ Remaining working forest acreage supports western Maine economy ✓ Complements and builds upon multiple impact avoidance and mitigation measures and conditions required by the Permit Orders

Attachment 1

Conservation Easement

NEW ENGLAND CLEAN ENERGY CONNECT SEGMENT 1 CONSERVATION EASEMENT

I. PROJECT NAME

New England Clean Energy Connect Segment 1 Conservation Easement

II. WORDS OF CONVEYANCE

Weyerhaeuser Company, having an address of 220 Occidental Avenue South, Seattle, WA 98104, (referred to as the "Grantor", which word shall, unless the context clearly indicates otherwise, include the above-named Grantor, its successors and assigns), for consideration paid and not as a gift, HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands** (the "State," which word shall, unless the context clearly indicates otherwise, include the State's successors and assigns, or "Holder"), a governmental entity having a mailing address of 22 State House Station, Augusta, Maine 04333 with QUITCLAIM COVENANT:

A. in perpetuity, the following described conservation easement (the "Conservation Easement" or the "Easement") on, over, under, and across the real property in Bradstreet Township, Parlin Pond Township, and Johnson Mountain Township, Somerset County, Maine, more particularly described in Exhibit A, subject to those exceptions to title set forth therein (the "Protected Property"), and generally depicted on the plan attached hereto and made a part hereof as Exhibit B as set forth below. Provided that within twenty-four months of the conveyance of this Conservation Easement from Grantor to Holder, a boundary line survey shall be completed of the Protected Property that also depicts any and all of the then-existing following located on the Protected Property: rights-of-way, roads, and structures and other improvements. Said survey shall be recorded as soon as practicable after completion and, upon recording, shall be incorporated herein and act as an amendment to this Conservation Easement to replace Exhibit B;

B. non-exclusive easement for Holder's pedestrian and vehicular access to the Protected Property as necessary or appropriate to exercise Holder's rights of monitoring and enforcement of the Easement hereunder, over:

    1. any and all rights-of-way and roads owned by Grantor, as more particularly described in Exhibit A and depicted on Exhibit B; and

2. any and all rights-of-way and roads owned by third parties over which Grantor has rights of access to the Protected Property to the extent that Grantor has the right to grant the same.

C. a non-exclusive right of public pedestrian access on and across the Protected Property for purposes of Non-Intensive Outdoor Recreation.

Grantor further HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Environmental Protection**, a governmental entity having a mailing address of 17 State House Station, Augusta, Maine 04333, third party enforcement rights of the Conservation Easement as set forth in Section X.

III. DEFINITIONS

A. "Alternative Qualified Holder" is defined in Section XI.B.
B. "Baseline Documentation" is defined in Section VII.A.5.
C. "Best Management Practices" are those forest management practices set forth in the publication entitled "Best Management Practices for Forestry: Protecting Maine's Water Quality," prepared by the Maine Department of Agriculture, Conservation and Forestry, Bureau of Forestry, in such publication's current version at the time of the grant of this Conservation Easement, and as the same may be further amended, supplemented, or replaced after the date of this grant.
D. "Commercial Forest Management Activities" include Commercial Forestry and timber cruising; resource evaluation; herbicide, pesticide, and fertilizer application; timber stand improvement; pruning; mechanical timber harvesting and other forest harvesting; wood chip production; forest products transportation; natural regeneration of forest stands; prevention of fire and disease; eradication of invasive species; wildlife habitat improvement; general maintenance of forest health and biological diversity; maple sugaring; forest carbon sequestration; forest carbon credit sales (consistent with Section VII.A.4); other substantially similar and associated activities; and the construction, creation, use, and maintenance of Land Management Roads, skid trails and Winter Haul Roads, turnouts, timber landings, and crossings of flowing waters for such purposes, all as consistent with the terms of this Conservation Easement.
E. "Commercial Forestry" is defined as the planting, growing, cultivation, stocking, and harvesting of trees and other forest products to produce marketable forest products.
F. "Conservation Plan" is defined in the Maine Department of Environmental Protection ("MDEP") Findings of Fact and Order, issued May 11, 2020, and the Maine Board of Environmental Protection ("MBEP") Findings of Fact and Order, issued July 21, 2022.
G. "Conservation Values" are defined in Section V.
H. "Forestland" is defined as land stocked with trees of any size or land formerly having had such tree cover that is being managed to return to forest cover.
I. "Force Majeure Event" is defined in Section VII.A.6.
J. "Forest Management Plan" is defined in Section VII.A.6.a.
K. "Grantor" is defined as the owner in fee simple of the real property that is subject to this Conservation Easement. The term "Grantor" shall include Grantor, its successors and

assigns, and their respective authorized agents, contractors, and employees, and where specifically set forth herein, licensees, and lessees of Grantor, its successors and assigns.

L. “Land Management Road” is defined as a route or track consisting of a bed of exposed mineral soil, gravel, or other surfacing material constructed for, or created by, the repeated passage of motorized vehicles and used primarily for forest management activities (refer to Exhibit C), but such definition does not include log landings, skid trails, skid roads, and Winter Haul Roads.

M. “Mature Forest” is defined as 50 foot or taller trees with a minimum basal area of 60 square feet per-acre containing a mix of native species, accompanied by the presence of representative levels of well distributed standing dead and downed trees.

N. “Mature Forest Goal” is defined in Section VII.A.6.

O. "Milestones" is defined in Section VII.A.6.

P. “MNAP” means the Maine Natural Areas Program, which is part of the Maine Department of Agriculture, Conservation and Forestry, or any successor State program or bureau that performs similar public functions.

Q. “MDIFW” means the Maine Department of Inland Fisheries and Wildlife, or any successor State agency or bureau that performs similar functions.

R. “NECEC” is defined as the New England Clean Energy Connect Transmission Line that runs from the Canadian border in Beattie Township, Maine to the point of interconnection to the New England power grid in Lewiston, Maine.

S. “Non-Intensive Outdoor Recreation” is defined as dispersed, non-commercial, non-exclusive, non-motorized individual or small group recreational activities that do not generally rely on buildings or spectator facilities. Such uses include hunting, fishing, trapping, hiking, nature observation, picnicking, boating, cross country skiing, snow-shoeing, dog sledding, bicycling (including electric bicycles), horseback riding, swimming, primitive non-commercial camping, and outdoor education and nature study, and enjoyment of open space; provided that the incidental use of the Protected Property by the public for these purposes supported by paid guides or outfitters is not commercial or exclusive use. The establishment by Grantor of permits and collection of access fees for use of campsites and other recreational facilities permitted under this Conservation Easement is also not commercial or exclusive use.

T. “Normal high watermark of the shore” is defined as that line on the shore of water bodies which is apparent from visible markings, changes in the character of the soils due to the prolonged action of the water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial land. In places where the shore or bank is of such character that the high watermark cannot be easily determined (rockslides, ledges, rapidly eroding or slumping banks), the normal high watermark will be estimated from places where it can be determined by the above method. Distances from the normal high watermark will be determined by horizontal measurement.

U. “Permitted Excavation Activities” is defined in Section VII.D.3.

V. “Plantation” is defined as stands that are artificially regenerated via intentional planting methods.

W. “Protected Property” is defined in Section II.A.

X. “Productive Forest Acres” are defined as any area capable of growing a crop of trees that can reach Mature Forest conditions. These areas will generally have a site index of 40 or greater or, at a minimum, the ability to support trees greater than 50 feet in height.

Y. "Riparian Habitat Management Standards" are those standards for riparian areas contained in Section VII.A.6.

Z. "Segment 1" is defined as the portion of the NECEC that runs from Beattie Township, Maine to The Forks Plantation, Maine.

AA. "The Order" is defined as the MDEP Findings of Fact and Order, issued May 11, 2020, permitting construction of the NECEC, and the MBEP Findings of Fact and Order, issued July 21, 2022, affirming and amending the May 11, 2020, MDEP Findings of Fact and Order.

BB. "The Parties" is defined as Grantor, Holder, and MDEP, for third party enforcement purposes.

CC. "Wetland" means any area saturated or inundated by water at a frequency or for a duration sufficient to support, and which under normal circumstances does support, vegetation typically adapted for life in saturated soils. In most cases, this would include areas below a recognizable debris line resulting from recurring, not extreme, water action. The "upland edge" of a wetland is the boundary between the upland and wetland, and not the edge of open water. Refer to Exhibit D for a map of wetlands and streams existing at the time of recording this Easement.

DD. "Winter Haul Road" means a route or travel way that is utilized for Commercial Forest Management Activities conducted exclusively during frozen ground conditions. Winter Haul Roads must follow applicable Best Management Practices.

IV. PURPOSES

The purposes of this Conservation Easement (the "Conservation Purposes") are to conserve in perpetuity habitat in the vicinity of NECEC Segment 1 with sufficient Mature Forest acreage to mitigate and offset the effects of habitat fragmentation associated with the construction and maintenance of NECEC Segment 1, including the related edge effect; to promote habitat connectivity and conservation of Mature Forest areas; and to provide conservation compensation for the NECEC.

The Conservation Purposes of this Conservation Easement are also to ensure the forests on the Protected Property are managed to maintain a healthy, biologically diverse, productive, and Mature Forest with diverse age classes; to conserve in perpetuity the Conservation Values of the Protected Property including wildlife and ecological values; to conserve water quality, wetlands, and riparian values; and to provide guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation.

Grantor covenants that no acts or uses that are inconsistent with the Conservation Purposes shall be conducted on the Protected Property.

V. RECITALS

The following recitals (the "Recitals") more particularly describe the conservation attributes and Conservation Values of the Protected Property and the significance of this grant:

WHEREAS, Grantor is the sole owner in fee simple of 50,063 +/- acres of real property in Somerset County, as the same is described in Exhibit A, and wishes to convey a Conservation Easement over the 50,063 +/- acre Protected Property, which consists of substantially undeveloped forested land;

WHEREAS, the Protected Property is in the vicinity of Segment 1;

WHEREAS, in connection with the NECEC, the MDEP and the MBEP issued the Order;

WHEREAS, because of the impacts of the NECEC, the Order requires NECEC Transmission LLC to permanently conserve 50,000 acres of land in the vicinity of Segment 1 to, among other things, ensure the protection of wildlife;

WHEREAS, the Order requires NECEC to create and implement a Conservation Plan, as described and defined in the Order;

WHEREAS, the Conservation Plan has as its primary goal compensation for the fragmenting effect on habitat of the NECEC, and the related edge effect, by promoting habitat connectivity and conservation of Mature Forest areas;

WHEREAS, the Order allows commercial timber operations on the Protected Property provided that such operations are consistent with the conservation of Mature Forest areas;

WHEREAS, the Protected Property is desirable for conservation in furtherance of the goals of the Conservation Plan and includes the following conservation values to be conserved (collectively, the "Conservation Values"):

a. The Protected Property is a predominately forested land area of significant breadth and diversity, with outstanding values including sizeable Mature Forests, large blocks of wildlife and plant habitat, rare, threatened, and endangered species and their associated habitat, extensive bogs, wetlands, rivers, streams, lakes, remote ponds and other water bodies, and unique natural features, all of which are further quantified and delineated in the Baseline Documentation.

b. The Protected Property has ecological importance as wildlife and fisheries habitat. Conservation of the Protected Property under the terms of this Conservation Easement, by prohibiting development of the Protected Property in excess of that allowed under this Conservation Easement, will have a permanent, beneficial impact on the ecological benefits of such areas and species.

c. The Protected Property provides habitat that is suitable for diverse wildlife species of conservation interest, including mammals such as pine marten and white-tailed deer, as well as brook trout, landlocked salmon, other fish, and many species of forest interior dwelling birds, waterfowl, reptiles, and amphibians.

d. The Protected Property contains identified recreational areas important to the people of the State of Maine, and guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation in perpetuity, consistent with the preservation and protection of the other values of the Protected Property and Grantor's reserved rights, is in the public interest;

WHEREAS, subject to the terms of this Conservation Easement and an approved Forest Management Plan, the continued management of the Protected Property as a dynamic landscape at different stages of growth, ages, and composition to develop and conserve Mature Forest is compatible with the preservation and promotion of habitat connectivity, minimizes fragmentation of forest ecosystems, and provides more permanent forest and habitat resiliency;

WHEREAS, pursuant to 33 M.R.S. § 476(2)(A) and 12 M.R.S. § 1850(1), Holder may acquire and hold a conservation easement on the Protected Property, which conservation easement is a component of the Conservation Plan required by the Order;

WHEREAS, the Parties have prepared and completed the Baseline Documentation at the time of the recording of this Conservation Easement, which, in accordance with Section VII.A.5, is intended to serve as an objective, although not exclusive, information baseline for monitoring compliance with the terms of this Conservation Easement;

WHEREAS, the Parties desire to implement certain restrictions on the use of the Protected Property, impose obligations on Grantor and any future owners of the Protected Property, and grant rights to Holder, and the MDEP, with respect to the Protected Property, in perpetuity, as set forth in this Conservation Easement; and

WHEREAS, the MDEP, has approved this Conservation Easement by order dated _____.

VI. INCORPORATION OF PURPOSES AND RECITALS

NOW THEREFORE, in consideration of the foregoing Conservation Purposes and Recitals, and for the benefit of the public, the Parties have established this Conservation Easement on, over, under, and across the Protected Property consisting of the following terms, covenants, and restrictions, which shall run with and bind the Protected Property in perpetuity.

VII. RESTRICTIONS AND RESERVED RIGHTS

Except for the rights expressly conveyed by this Conservation Easement to Holder (hereinafter "Holder's Affirmative Rights"), and except for the restrictions stated in this Conservation Easement, Grantor retains all ownership rights in the Protected Property and may use the Protected Property for any lawful purpose, including, without limitation, those uses expressly reserved by Grantor herein (hereinafter "Grantor's Reserved Rights"), provided that any such use is consistent with the Conservation Purposes of this

Conservation Easement. Any activities on or uses of the Protected Property that are inconsistent with the Conservation Purposes are prohibited. Without limiting the generality of the foregoing, the following restrictions and other terms are applicable to the Protected Property.

A. LAND USE

1. **Limitations on Development; Exceptions.** Residential, industrial, and commercial activities and development, quarrying, mining, mineral development, alteration of watercourses and water bodies, and building development activities are prohibited on the Protected Property, except as permitted for the authorized uses in this Conservation Easement, including but not limited to: Commercial Forest Management Activities (see Section VII.A.6), Permitted Excavation and Use of Gravel, Sand, and Rock, (see Section VII.D.3), Ecosystem Service Markets (see Section VI.A.4), Forest and Vegetation Management (see Section VII.E), Incidental Operations (see Section VII.E) and for the enhancement of Non-Intensive Outdoor Recreation by the public as defined herein and other activities expressly permitted by this Conservation Easement or reserved by Grantor.

   Without limiting the generality of the foregoing restriction, except as currently exists as reflected in the Baseline Documentation, residential housing units, condominiums, trailer parks, mobile homes, high-intensity lighting, motels or hotels, commercial advertising, billboards, towers, facilities or transmission lines, antennas or equipment for telecommunications or radar, and use of the Protected Property as an aircraft landing site except in an emergency, are all specifically prohibited.

2. **Storage and Disposal of Waste; Organic Matter; Hazardous Substances Associated with Commercial Forest Management.** Discharge of wastewater into surface or ground waters on or under the Protected Property is prohibited. It is forbidden to dispose of, or store, on the Protected Property, rubbish, garbage, building debris, unserviceable vehicles and equipment or parts thereof, hazardous or other waste, hazardous or toxic substances, or other unsightly or offensive waste material. Except that organic matter and logging slash generated on the Protected Property, but not elsewhere, may be used, stored, or disposed of on the Protected Property as part of Commercial Forest Management Activities. Other waste generated by permitted uses on the Protected Property may be stored temporarily in appropriate containers for removal at reasonable intervals, all in accordance with applicable state, local, and federal law. Notwithstanding the foregoing, fuel and other hazardous or toxic substances used in the ordinary course of conducting Commercial Forest Management Activities on the Protected Property may be stored thereon in accordance with applicable state, local, and federal laws and regulations.

3. **Limitations on Additional Easements and Other Rights.**

   (a) Access and Utility Easements. No new rights-of way, easements of ingress or egress, driveways, roads, utility distribution or service lines, towers, or other easements shall be granted, constructed, developed, or maintained into, on, over, under, or across the

Protected Property without the prior written approval of the Holder. With respect to State Route 201, Holder may provide its prior written approval if such easement rights minimize adverse impacts to the Conservation Values and Holder determines that such easement rights are: (1) necessary for the Maine Department of Transportation to comply with federal or state law or (2) necessary for public safety.

(b) Leases and Licenses. No new leases, licenses, or other interests in land that establish a right-of-way, corridor of ingress or egress, driveway, road, utility distribution or service line, or tower shall be granted, constructed, developed, or maintained into, on, over, under, or across the Protected Property without the prior written approval of the Holder. Notwithstanding the foregoing, advanced notice to Holder shall not be required for short-term and temporary licenses or leases across existing rights-of-way or land, so long as such licenses or leases do not include any land-clearing activities. For purposes of this Section VII.A.3(b), short-term and temporary means less than three years. Sugar bush leases may be granted, provided that Grantor obtains the Holder's prior written approval.

(c) Conservation Easements. No additional conservation easements or deed restrictions shall be placed on the Protected Property without the prior written approval of the Holder.

4. **Ecosystem Service Markets.** Grantor may participate in ecosystem service market programs, including but not limited to carbon credit programs and stream, wetland, and species mitigation credit programs, that are consistent with this Conservation Easement and that do not affect Holder's right of enforcement of the Conservation Easement.

5. **Baseline Documentation.** To describe the present condition of the Protected Property and its relevant natural features, resources, and conditions, Grantor and Holder have established an inventory of the same (the "Baseline Documentation") and have certified the same as an accurate representation of the condition of the Protected Property as known to them as of the date of this grant. The Baseline Documentation is incorporated into this Conservation Easement by reference.

   Holder will prepare addenda to the Baseline Documentation from time to time to document changes to the Protected Property. Such addenda will become a part of the Baseline Documentation upon the mutual approval of Grantor and Holder. Holder will forward copies of such addenda to Grantor for Grantor's records. Holder also shall provide to MDEP, upon request, copies of the then-current Baseline Documentation with all applicable addenda.

6. **Land Uses in Accordance with a Forest Management Plan, Best Management Practices, and Applicable Laws and Regulations.**

   To establish and maintain in perpetuity wildlife travel corridors along riparian areas and between Mature Forest habitat, a 100-foot no-harvest buffer must be maintained around all perennial streams and associated open wetlands as depicted in the Baseline

Documentation beginning at the normal high-water line (up to no more than approximately 2,400 acres), and management must be maintained for continuous Mature Forest habitat from 100 feet to 330 feet from the normal high water line (up to no more than approximately 4,500 additional acres). Harvesting equipment crossings of these perennial streams is prohibited, except to construct road or skid trail crossings, as described in the Annual Report described in subsection VII.E.1(c)ii., to facilitate Commercial Forest Management Activities, in which case those crossings will be minimized and constructed to protect streambank integrity (all of the preceding in this paragraph being "Riparian Habitat Management Standards").

At a minimum, Commercial Forest Management Activities must result in 50% of the Productive Forest Acres as identified in the Baseline Document and Forest Management Plan of the protected property with 50 foot or taller trees consisting of a mix of native species with a minimum basal area of 60 square feet per acre of live trees, accompanied by representative levels of well distributed standing dead and downed trees where present prior to management activity no later than December 31, 2065, and thereafter in perpetuity (the "Mature Forest Goal"). Progress toward the Mature Forest Goal will be made at the following rates: 13% in 2025, 20% in 2035, 30% in 2045, 40% in 2055, and 50% in 2065 (collectively, "Milestones"). Progress toward reaching the Milestones and Mature Forest Goal will be provided to Grantor in annual progress reports and, as necessary, addressed in updates to the Forest Management Plan. Holder has the right to seek verification of Grantor's measurements toward reaching the Milestones and Mature Forest Goal, provided that such verification is performed by the Maine Forest Service or another third party agreed to by Grantor. Notwithstanding the above, Grantor and the Holder agree that in the event that a hurricane, fire, flood, drought, disease, or forest health pest outbreak causes or substantially contributes to the failure of Grantor to meet the Milestones or Mature Forest Goal ("Force Majeure Event"), then Grantor shall not be found in non-compliance with this Conservation Easement. Following such an event, the Grantor and Holder shall work cooperatively to revise the Forest Management Plan in furtherance of the Conservation Values of this Conservation Easement, which may include deferring further harvests until the Mature Forest Goals are met. Any further harvesting shall require prior written approval of the Holder and give priority to restoring progress towards the Milestones and the Mature Forest Goal.

A Forest Management Plan (the "Forest Management Plan") must be developed for the Protected Property as required by the Order. All permitted land use activities on the Protected Property must be conducted in accordance with applicable local, state, and federal laws and regulations and Best Management Practices, in a manner consistent with the Purposes and other terms of this Conservation Easement, and in conformity with the Forest Management Plan.

(a) Forest Management Plan. As of the date of this Conservation Easement, Grantor has submitted a 10-year Forest Management Plan, for Holder approval, that meets the requirements set forth in this Section VII.A.6. The Forest Management Plan has been prepared for Grantor by one or more professional foresters licensed in the State of Maine and has been approved by the Holder and MDEP as consistent with the terms

of this Conservation Easement. All permitted land use activities on the Protected Property, including Commercial Forest Management Activities, must be conducted in accordance with the approved Forest Management Plan, except for preliminary resource evaluation. Updates to the Forest Management Plan must be completed every ten years and prepared by a professional forester licensed in the State of Maine and must comply with the requirements of this Conservation Easement. The Grantor must provide to Holder a copy of the Forest Management Plan. As specified in Section VII.A.6(f), Grantor must also provide to Holder for Holder's review, but not for Holder's approval, a copy of the ten-year updates to the Forest Management Plan.

(b) Provisions of the Forest Management Plan - General. The Forest Management Plan must include, at a minimum, the following information:

i. identification of the natural and physical features of the Protected Property at the time of adoption and at the time of periodic updates of the Forest Management Plan, including forest types, species composition, current stocking levels, age, quality, health, and relevant stand history to the extent known; current and planned harvest areas; existing access routes; wetlands and water bodies; and locations of special plant or wildlife habitat, including significant wildlife habitats, habitat for rare, threatened, or endangered plant and wildlife species, and rare or exemplary natural communities identified in publicly available information; and other special management areas;

ii. a description of Grantor's actions to protect and manage soil productivity and water quality, including, where Commercial Forest Management Activities are undertaken, practices to be employed upon completion of harvesting operations to ensure soil stabilization as may be required to comply with Best Management Practices, or other comparable or more protective standards for soil and water protection acceptable to Grantor and approved in advance by Holder;

iii. a description of how Commercial Forest Management Activities and other permitted activities will be conducted to: (1) minimize impacts to important plant and wildlife habitats present; (2) manage known site-specific occurrences of animal and plant species that are listed by state or federal agencies as endangered, threatened, or of "special concern" for such time period as such species are so listed; and (3) meet the requirements of state and federal law regarding threatened and endangered species and include best management practices for these species as proposed during consultation with MDIFW. So long as appropriate consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

iv. a description of the foreseeable situations in which chemical applications will be recommended, including the type, method of application, and recommended measures to protect water quality, fish and wildlife, and public safety.

v. management guidelines and restrictions for the following areas: (1) Deer Wintering Areas as mapped by the MDIFW or successor agency; and (2) vernal pools, Bat Hibernacula, Inland Wading Bird and Waterfowl Habitats, Heritage Fish Waters, and rare / exemplary natural communities, as identified by MNAP. Management guidelines and restrictions on activities within these areas should be consistent with this Conservation Easement, Best Management Practices, and MDIFW and MNAP recommendations, and with goals of improving forest health, promoting Mature Forest, and protecting plant and wildlife habitat and water quality. So long as appropriate consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

vi. a description of the Milestones and how the Protected Property will be managed to meet the Mature Forest Goal to provide for blocks of areas of habitat for species preferring Mature Forest habitat and wildlife travel corridors along riparian areas and between Mature Forest habitat; and

vii. a description and mapping of known recreational spots and trails used by the public; and

viii. a copy of this Conservation Easement as an Appendix to the Forest Management Plan.

(c) Additional Provisions of the Forest Management Plan Specific to Commercial Forest Management Activities. The Forest Management Plan must contain the following additional information:

i. a description of forest management goals and how forestry methods and actions proposed will meet the Mature Forest Goal and other requirements of Section VII.A.6, protect forest health, and are consistent with the Conservation Purposes and other terms of this Conservation Easement, taking into account the natural structure, function, and dynamics of the forest to the extent practicable given baseline forest conditions as of the date of this Conservation Easement;

ii. a recent or reasonably updated forest inventory at a density appropriate to the scale and history of the forest on the Protected Property, including current stand-typing information (forest type-size-density classes), species, size classes, and products for the Protected Property as of the date of the Forest Management Plan or Forest Management Plan update;

iii. a representation of progress made toward reaching Milestones and the Mature Forest Goal.

(d) Term of the Forest Management Plan. Grantor must submit to the Holder at least every ten years an update to the Forest Management Plan prepared for Grantor as provided in Section VII.A.6(a) above, for the Holder's review as provided in Section VII.A.6(f) below.

Nothing herein shall prohibit Grantor from submitting a new or updated Forest Management Plan more frequently than every ten years provided, however, that any revised Forest Management Plan submitted during the first ten years must be approved by the Holder. The Forest Management Plan must encompass the entire portion of the Protected Property owned by Grantor and is subject to the Holder's review pursuant to Section VII.A.6.f below.

(e) Property Transfer; Forest Management Plan adopted by a subsequent owner. In the event of a transfer of title of the Protected Property, a subsequent owner must adopt a Forest Management Plan. This may be done either: (1) with notice to the Holder, by adopting the prior owner's existing Forest Management Plan for the Protected Property and if so adopted, operating consistently with that plan, or (2) by submitting a new Forest Management Plan. Upon review of such new Forest Management Plan by the Holder pursuant to Section VII.A.6(f) below, such Forest Management Plan is considered adopted by the new owner, and that owner must operate within the constraints of such Forest Management Plan and in accordance with the terms of the Easement.

(f) Holder Review. Grantor must provide to the Holder any proposed Forest Management Plan or amendments to the Forest Management Plan. Within 45 days of receipt of the amended Plan, the Holder will provide written comments to Grantor identifying and explaining any portion of the Forest Management Plan that the Holder finds to be inconsistent with the terms of this Conservation Easement and that could result in a violation of this Conservation Easement. The Holder's review will only be based on whether the Plan contains all the required plan elements and is consistent with the terms of this Conservation Easement. If the Holder does not provide comments within 45 days, the proposed or amended Forest Management Plan shall be deemed adopted. Upon adoption, the Grantor shall ensure that all forest management activities are conducted in accordance with both the adopted Forest Management Plan and the terms of this Conservation Easement. The Parties acknowledge that the purpose of the Forest Management Plan is to guide management activities so that they are in compliance with this Conservation Easement, and that, barring a Force Majeure Event, the actual outcomes resulting from management activities on the Protected Property will determine compliance with this Conservation Easement. The Holder's right to provide comments or failure to exercise that right does not constitute a waiver of the terms of this Conservation Easement.

7. Maintenance of Boundaries. It is Grantor's responsibility to, at Grantor's cost and expense, locate and keep the boundaries of the Protected Property clearly marked on the ground. Notwithstanding the foregoing, Holder has the right, but not the obligation, to maintain the boundaries of the Protected Property so that they are readily visible and identifiable. In the event of a suspected or material infringement or encroachment on the Protected Property, Grantor is solely responsible for establishing and re-establishing the boundary through flagging or blazing, or as necessary by surveying the boundary of the Protected Property affected by the suspected or material infringement and for an appropriate distance on either side of the affected area to prevent or abate unauthorized actions of a third party in violation of this Conservation Easement.

B. SUBDIVISION

1. **Limitation on Division.** The Protected Property shall remain in its current configuration without subdivision, partition, or other division into parcels or lots that results in the transfer or conveyance by deed, lease, or contract of any portion of the Protected Property into separate ownership or control from the remainder of the Protected Property. Notwithstanding the preceding, Grantor may subdivide, convey, and re-convey the Protected Property or any portion thereof solely for the purpose of allocating distinct parcels ("Tax Parcels") as part of an intra-company transfer, if all of the following conditions are met: (1) a Tax Parcel can only be conveyed to a parent, subsidiary, affiliate, or successor of the Grantor; (2) no Tax Parcel can be subsequently conveyed to any party that is not a parent, subsidiary, affiliate, or successor of the Grantor, unless all of the Protected Property is conveyed simultaneously to that same transferee; (3) all parcels comprising the Protected Property must be managed as a single unit with a single Forest Management Plan and Annual Report, and all terms of this Conservation Easement shall apply to all parcels as if they constituted a single, unified parcel of land; (4) all notices, consents, and approvals for all parcels comprising the Protected Property shall be sent to a single contact as provided herein under Section VIII.B; (5) such Tax Parcels may be held by no more than six (6) distinct legal entities at any one time; and (6) Grantor provides Holder 30 days written notice prior to the creation or conveyance of any Tax Parcel.

2. **Boundary Line Agreements.** Grantor may enter into boundary line agreements relating to the Protected Property to resolve bona fide boundary line disputes with the prior written approval of the Holder, which shall not be unreasonably withheld, provided that the total acreage of land protected under this Conservation Easement must not be reduced by a material amount as a result of any such agreement without court order. For purposes of this section, "bona fide boundary line dispute" means a dispute, disagreement, or discrepancy regarding the location of a boundary line between the Protected Property and an abutting parcel arising from inconsistencies in deed descriptions, surveys, historic use, or irregularities in boundary markers. Any land acquired by Grantor by virtue of such boundary line agreements will become subject to this Conservation Easement, unless Holder agrees otherwise, and any land conveyed to a third party by virtue of such boundary line agreements will, upon such conveyance, be deemed released from this Conservation Easement. Land acquired or conveyed to a third party by virtue of a boundary line agreement shall be memorialized by amendment to this Conservation Easement, which amendment shall update the Exhibit A Legal Description and attach a new Exhibit B Survey Plan, which shall be a survey showing the area affected by the boundary line agreement.

3. **Certain Exception - Conveyances to State Agencies.** The fee interest in any portion of the Protected Property may be conveyed to the State of Maine for permanent conservation ownership, subject to the terms of this Conservation Easement. Such conveyance does not constitute a division, partition, subdivision or other legal or de facto creation of lots or parcels in separate ownership under this Section VII.B.

4. **Development Rights Extinguished.** Except as provided for by the terms of this Conservation Easement, all rights to develop or use the Protected Property that are expressly prohibited by this Conservation Easement are hereby extinguished, and as a result of such extinguishment, shall not be available for transfer to any other lands pursuant to a transferable development rights scheme or cluster development arrangement or otherwise. Neither the Protected Property nor any portion thereof may be included as part of the gross area of any other property not subject to this Conservation Easement for the purposes of determining density, lot coverage, or open space requirements under an otherwise applicable statute, regulation, or ordinance controlling land use and building density.

C. STRUCTURES

Existing buildings and structures on the Protected Property, as documented in the Baseline Documentation, may be maintained, repaired, or reconfigured, provided they remain within the same footprint, are not expanded, and are in accordance with applicable land use and building laws and regulations.

Except as provided below, no additional structures or towers of any kind, temporary or permanent, may be located on the Protected Property. Structures that are permitted include:

1. **Minor Non-Forestry/Recreational Structures.** Grantor reserves the right, but not the obligation, to install, maintain, replace, and relocate on the Protected Property minor, small scale structures to enhance the opportunity for, and management of, Non-Intensive Outdoor Recreation by the public, including, but not limited to: trail markers; small unlighted informational and interpretive signs; trail improvements such as steps, bog bridges, water bars, bridges to be used for recreational purposes, boardwalks, platforms, and railings; wells and springs for fresh water supply; small boat platforms, outhauls, and docks; primitive campsite facilities, fire rings, pit toilets, picnic tables, temporary tents for camping, and tent platforms; wildlife observation stations; study markers and grids; barriers or low fences to protect fragile areas and areas under active management or study; and gates or barriers to control unauthorized use or prevent or limit access by motor vehicles, provided that if Grantor erects any such permanent barriers or gates across roads and access points Grantor must notify Holder and post signs notifying members of the public that pedestrian access is permitted at the location of each barrier or gate, or allow the Holder to post such notice. Grantor must provide Holder with a key or code to be able to access the Protected Property as provided for in Section X.A.

2. **Forestry Structures and Improvements.** Grantor reserves the right to install, maintain, replace, and relocate on the Protected Property the following improvements and structures ("Forestry Structures and Improvements") necessary or appropriate to accomplish allowed Commercial Forest Management Activities, consistent with the Forest Management Plan:

(a) minor improvements and structures including but not limited to gates, barriers, and boundary markers;

(b) temporary structures and improvements, including, but not limited to, temporary equipment sheds, temporary sawmills, temporary office trailers and shelters for workers, portable privies, and additional similar types of temporary structures (for purposes of this section, "temporary" means that such structures are situated in a particular location for five years or less and are not thereafter situated or erected at that same location during a period of time which is one year from the date of removal of the same), but in no case shall a temporary structure include a permanent foundation; and

(c) Land Management Roads, Winter Haul Roads, skid trails and roads or other logging trails, and associated bridges, drainage, and support structures in accordance with the Forest Management Plan and Section VII.A.6.

3. **Remedy for Adverse Conditions.** When Forestry Structures and Improvements cease to be used, as evidenced by the cessation of their use for a period of two (2) consecutive years and lack of maintenance, and such cessation of use and lack of maintenance results in an unsafe condition, a danger to human health, or a threat to the environment (an "adverse condition"), then Grantor must either remedy such adverse conditions, or remove such improvements, which may include burning or burying any decaying structures. If so removed, the site of such structures, improvements and utilities must be revegetated with native species and stabilized, all at Grantor's cost and expense. This does not apply to roads generally but does apply to road-stream crossing infrastructure.

4. **Notice.** Before commencing site preparation, construction, or relocation of any Land Management Roads or bridges (but specifically excluding routine maintenance, repair and replacement of existing roads and bridges for which no notice and/or approval are required) Grantor must notify Holder if such planned activities have not been previously described in the Forest Management Plan or Annual Report described in Section VII.A.6. Such notice and descriptions must, at a minimum, provide sufficient information to enable the State to determine whether the proposed activities are consistent with the terms of this Conservation Easement.

D. SURFACE ALTERATIONS

As of the date of this grant, there are no surface alterations on the Protected Property except for unpaved snowmobile trails, ATV trails, foot trails, skid trails, unpaved woods roads and timber landing areas, and culverts and similar erosion control systems, gravel pits, and alterations associated with existing structures, all of which are described in the Baseline Documentation.

No additional filling, dumping, excavation, quarrying, mining, or other alteration may be made to the surface or subsurface of the Protected Property or to its surface or ground waters, or wetlands, except that Grantor reserves the following rights:

1. **Maintenance of Existing Surface Alterations.** Grantor reserves the right to maintain existing surface alterations described above in this Section VII.D, and the right to alter the surface to the extent reasonably necessary to exercise the rights conveyed or reserved in Sections VII.C ("Structures"), VII.E ("Forest and Vegetative Management"), and Section VII.F ("Access").

2. **Establishment of Trails, Roads, Parking Areas, and Certain Facilities.** Grantor reserves the right to construct, install, maintain, and relocate Land Management Roads, including culverts, bridges, other similar drainage and support structures and erosion control devices, Winter Haul Roads, gates, skid trails and skid roads, timber landing areas, and equipment and vehicle parking areas, associated with Grantor's Reserved Rights, including to support Commercial Forest Management Activities and Non-Intensive Outdoor Recreation on the Protected Property; provided that any such roads, parking areas, and water crossings shall abide by applicable local, state, and federal laws and regulations. The establishment of any new Land Management Roads or the relocation of existing Land Management Roads requires prior written approval from Holder. Grantor reserves the further right, but not the obligation, to establish and maintain, or allow others to establish and maintain, additional unpaved footpaths and recreational trails for Non-Intensive Outdoor Recreation, with notice to Holder, and provided that they are located and designed in a manner to prevent soil erosion and prevent damage to fragile plant communities and wildlife habitat.

   Public parking areas may be permitted subject to the prior written approval of the Holder, provided they are reasonably small and scaled to meet the intended use, unpaved, and consistent with the terms of this Conservation Easement.

   All such activity by Grantor must be conducted in a manner that is consistent with the Forest Management Plan and in compliance with any applicable statutory and regulatory requirements, Best Management Practices, and the terms of this Conservation Easement.

3. **Permitted Excavation and Use of Gravel, Sand, and Rock.**

   (a) Uses: Except where otherwise specifically prohibited or restricted by this Conservation Easement, Grantor reserves the right to excavate, remove, and use gravel, sand, and rock found on the Protected Property in connection with the following permitted activities (the "Permitted Excavation Activities"):

      (i) the exercise of Grantor's Reserved Rights on the Protected Property;

      (ii) the construction of and maintenance of:

         (aa) Land Management Roads, timber landings, and trails on the Protected Property;

(bb) Roads or trails providing public pedestrian and vehicular access, on, over, and across the Protected Property; and

(cc) Public parking areas as described above in VII.D.2.

(iii) the commercial sale of gravel, sand, and rock to any third party.

(iv) as may be provided to the Holder by Grantor, at Grantor's option, to support the Holder's rights herein.

(b) Standards: Grantor's Permitted Excavation Activities, including any reclamation undertaken following such activities, shall be conducted in accordance with the following standards:

(i) the exposed mineral surface of any new gravel, sand, or rock pit shall be limited to not more than ten (10) acres of exposed mineral surface per site at any time with not more than an aggregate of seventy (70) acres exposed at any one time, and a total aggregate area of mined acreage in perpetuity of one hundred fifty (150) acres for all Permitted Excavation Activities. For any existing pit larger than 10 acres that is identified in the Baseline Documentation, Grantor may continue extractions without changing the footprint of the pit. Changes to the footprint of any such pit must bring the resulting pit within the 10-acre limitation, but not expand further until such portions have been restored to bring the pit within 10 acres in size.

(ii) All Excavation Activities are prohibited within 330 feet of mapped perennial streams as depicted in Exhibit D. For existing pits in riparian buffers, there shall be no expansion of such pits.

(iii) Grantor shall take measures to prevent erosion and sedimentation from the Permitted Excavation Activities into all waterbodies, which measures may include ditches, sedimentation basins, dikes, dams, or such other control devices that are effective in preventing sediments from being eroded or deposited into such water body.

(iv) All excavation activities are prohibited below an elevation that is two (2) feet above the seasonal high groundwater level.

(v) No fuel, petroleum products, salt, or chemicals may be routinely stored in any gravel pit.

(vi) No equipment may be routinely fueled in any gravel pit.

(c) Reclamation of sites. All gravel, sand, and rock pits created or re-opened after the recording of this Conservation Easement shall be reclaimed and restored with native vegetation within two (2) years after Grantor determines that such pits are exhausted.

Upon reclamation, such pits will no longer count toward the 70-acre aggregate cap of exposed acres at any one time identified in SectionVII.D.3(b)(i).

4. **Excavation for Research Purposes.** Grantor reserves the right, subject to prior notice to the Holder, to permit limited excavation of the surface of the Protected Property for ecological, educational, scientific research, or cultural or archeological investigation conducted under then generally accepted professional standards that will not adversely impact the Conservation Values of the Protected Property. Excavation permitted by this Section VII.D.4 must not exceed one (1) acre in the aggregate exposed at any one time, without the prior written approval of the Holder.

E. FOREST AND VEGETATIVE MANAGEMENT

As of the date of this grant, the Protected Property remains largely undeveloped and predominantly forested. Silvicultural practices on the Protected Property must prioritize the conservation of Mature Forest habitat within a dynamic landscape that includes forests at various stages of growth, age, and composition. These practices shall, as set forth in the Forest Management Plan, ensure achievement of the Mature Forest Goal, enhance habitat connectivity, and establish permanent wildlife travel corridors along riparian areas.

Grantor reserves the right to manage vegetation on the Protected Property for commercial and non-commercial purposes in a manner that ensures achievement of the Mature Forest Goal. All such management must be in accordance with the Forest Management Plan.

1. **Vegetation Management for Commercial Forestry Purposes.** Grantor reserves the right to manage the vegetation on the Protected Property in accordance with the Forest Management Plan and as set forth below in this Section VII.E.1.

   Vegetation management on the Protected Property should encourage a full range of site adapted native species and be consistent with the Conservation Purposes of the Conservation Easement. Existing Plantations are shown on Exhibit E and described in the Forest Management Plan and may be counted as Mature Forest. New Plantations may be created up to a total aggregate of 4,000 acres total in Plantations at any one time, but such new Plantations may not count as Mature Forest. Grantor shall consult with Holder in advance of establishing new Plantations utilizing any species that are not native to the State of Maine or the Acadian forest; provided that in no event shall Grantor utilize in Plantations any non-native species identified on the list of Regulated Invasive Terrestrial Plant Species developed by the Department of Agriculture, Conservation and Forestry, as currently set out at Chapter 273 and may be later amended.

   (a) Waiver in Specific Circumstances. Grantor and the Holder agree that in the event of a hurricane, fire, flood, drought, or similar event or if an insect, disease, or forest health pest outbreak occurs and sanitation or salvage harvests are necessary to prevent the outbreak from spreading to adjacent stands then the restrictions in this Section VII.E.1 may be temporarily waived with the prior written approval of the Holder.

(b) Supervision of Timber Harvesting. Timber harvesting on the Protected Property must be supervised by a professional forester licensed in the State of Maine.

(c) Grantor's Reporting Obligations.

(i) From time to time or upon request, Grantor will make best efforts to provide to the Holder copies of Forest Operations Notifications and other notifications regarding harvest locations, harvest activities, and related information (and all amendments, modifications changes, and supplements thereto) applicable to the Protected Property (the "Harvest Notifications") simultaneously with Grantor's transmittal of the same to the State of Maine, Department of Agriculture, Conservation and Forest, Bureau of Forestry (a/k/a the Maine Forest Service) or successor agency.

(ii) Grantor must provide the Holder with a written annual report that accurately describes the forestry and other activities on the Protected Property during the preceding year, including harvest locations ("Annual Report"). Grantor must also describe in the Annual Report the estimated location, silvicultural objectives, and timing of all forestry operations and other activities planned for the coming year, including planned skid trail crossings. In the report, Grantor must also demonstrate the consistency of such completed and anticipated forestry activities with the Forest Management Plan.

(iii) Grantor must provide the Holder with reasonable opportunity to meet with Grantor and its supervising licensed professional forester at least annually to review the Annual Report.

2. **Vegetation Management to support Non-Intensive Outdoor Recreation and Affirmative Rights Conveyed to the State.** Grantor has the right, but not the obligation, to manage vegetation by cutting, pruning, and planting as necessary to accommodate Non-Intensive Outdoor Recreation in accordance with the Forest Management Plan and as set forth in Section VII.F. Such vegetation management may include the minimal removal of vegetation for safety purposes and for the creation of scenic vistas and views from trails, public roadways, campsites, overlooks, and other public vantage points; provided that all such vegetation management must be conducted in a manner that does not adversely impact the Conservation Values and scenic character of the Protected Property; and further provided that no new openings or clearings in the forest greater than one-half (1/2) acre are permitted for such purposes without the prior written approval of the Holder.

3. **Incidental Operations.** Small-scale commercial or industrial operations incidental to and compatible or in connection with activities and uses expressly permitted under this Conservation Easement, such as commercial guiding, hunting bear over bait, and similar commercial recreational ventures, are allowed on the Protected Property. Subject to Holder's prior written approval, the processing and sale of products produced on the Protected Property incidental to and compatible or in connection with activities and uses permitted under this Conservation Easement are allowed on the Protected Property.

F. ACCESS

1. **Non-Motorized Public Access On and Across the Protected Property.** Grantor must permit public access on and across the Protected Property for Non-Intensive Outdoor Recreation in accordance with this section.

   Grantor agrees to take no actions to prohibit or discourage non-motorized access by the public on or over the Protected Property for Non-Intensive Outdoor Recreation, subject to reasonable rules and regulations as provided in Section VII.F.3 and the Forest Management Plan.

2. **Fees.** Neither Holder nor Grantor may charge the public fees for access to or use of the Protected Property for Non-Intensive Outdoor Recreation. Under no circumstances may Grantor retain or allow exclusive use of the Protected Property to any person or entity for recreational purposes.

3. **Rules and Regulations.** Grantor may make reasonable rules and regulations for managing or prohibiting any of the following uses for Non-Intensive Outdoor Recreation: night use; camping; noise-generating activities; open fires; use of motor vehicles; paid guides, outfitters, or services; access by domesticated animals or pets; bear baiting or hunting with dogs; any use that may interfere with or be harmful to members of the public using the Protected Property, adversely impact the Conservation Values of the Protected Property, or the proper exercise of Grantor's reserved rights. Grantor also has the right to temporarily restrict public access on limited areas of the Protected Property, and to relocate designated trails, to protect fragile areas under study, or for safety purposes during Commercial Forestry Management Activities, or during other permitted management activities that may pose a hazard to recreational users or to ensure safety, to permit necessary maintenance, or to preserve scenic, ecological, or other Conservation Values of the Protected Property. Grantor shall make best efforts to provide prompt written notice to Holder for any restrictions to public access guaranteed under this easement where such restrictions either: a) are anticipated to last for more than one season; or b) will or may significantly affect Non-Intensive Outdoor Recreation (e.g., mainline road closures, trail access) or Holder's rights of monitoring and enforcement.

4. **Recreational Use Statute.** Nothing in this Conservation Easement shall be interpreted as an assumption of responsibility by, or basis for liability on the part of, Grantor or Holder for any injury to person or damage to property or loss of life that may be sustained by any person as a result of any entry on or use of the Protected Property, nor shall anything in this Easement be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A. Grantor and Holder specifically claim and retain all the protections, rights, defenses, and immunities provided under Maine law to owners, lessees, managers, holders of an easement, or occupants of land, including the protections contained in 14 M.R.S. § 159-A.

5. **Rights Granted and Reserved.** Nothing in this Conservation Easement shall be construed to preclude Grantor's right to grant licenses for management, or additional access on, over, or across the Protected Property for Non-Intensive Outdoor Recreation by the public, and for motorized or mechanized use by the public, subject to the prior written approval of the Holder, provided such licenses are consistent with the Conservation Purposes of this Conservation Easement and do not adversely impact the Conservation Values of the Protected Property.

   Additionally, nothing in this Conservation Easement shall prevent or limit access by Grantor or Holder across the Protected Property by motor vehicles over existing or approved forest roads for monitoring, management, or emergency purposes.

VIII. NOTICES, CONSENTS, AND APPROVALS

A. **Notices, Consents, and Approvals Provided to Holder.** Any notices, consents, or approvals provided to the Holder required by this Conservation Easement must be in writing and must be personally delivered or sent by registered or certified mail, or other courier providing reliable proof of delivery, to the following person and address, or such other person or address as may be hereafter specified:

   Director, Bureau of Parks and Lands
   22 State House Station
   Augusta, Maine 04333-0022

   With a copy to

   Office of Attorney General
   Natural Resources Division
   6 State House Station
   Augusta, ME 04333

   All other communication must be made by reasonable means under the circumstances. Notices to Holder or Holder's consent must include, at a minimum, sufficient information to enable Holder to determine whether proposed plans are consistent with the terms of this Conservation Easement.

B. **Notices, Consents and Approvals Provided to Grantor.** Any notices, consents, or approvals provided to Grantor required by this Conservation Easement must be sent by registered or certified mail, or other courier providing reliable proof of delivery, to Grantor's designee at the following address, or to such other person or address as may be hereafter specified:

   _____
   _____
   _____

With a copy to

_____

_____

_____

All other communication must be made by reasonable means under the circumstances. Such notices to Grantor or requests for Grantor consent, required or contemplated hereunder, must include, at a minimum, sufficient information to enable Grantor to determine whether the matter disclosed in the notice or the matter as to which consent is requested is consistent with the terms of this Conservation Easement.

C. Other Reasonable Methods of Communication. Notwithstanding the foregoing, as an alternative to delivery by registered or certified mail or other courier as provided above, notices, consents, and approvals may be delivered by other reasonable methods, such as email communications, as mutually agreed upon in advance, in writing, by Holder and Grantor. Documents with original signatures shall be provided upon the request of either party.

D. Designation of Agent for Grantor in Certain Cases. In the event that the Protected Property is owned by a trust, business entity, or any common or jointly held ownership, such grantor entity, or the common or joint owners, must designate an agent to be responsible for the granting of approvals of Grantor and the receipt of notices on behalf of Grantor. If no single owner or agent is so designated, the approval of or notice to, any executive officer of the business entity, or any one common or joint owner, is deemed the approval of or notice to all.

IX. COSTS AND LIABILITIES

A. Payment of Taxes and Discharge of Liens by Grantor. Grantor must pay and discharge when due all property taxes and assessments imposed upon the Protected Property and any uses thereof, and, subject to Section XII.G, avoid the imposition of any liens resulting from the actions of Grantor, its contractors and agents, which may impact Holder's rights hereunder. Subject to Section XII.G, Grantor must keep the Protected Property free of any liens or encumbrances, including without limitation those arising out of any work performed for, materials furnished to, or obligations incurred by Grantor. Holder must not incur any liens or encumbrances against the Protected Property, including, without limitation, those arising out of any work performed for, materials furnished to, or obligations incurred by Holder.

B. No Possessory Rights. Except as provided in Section VII, Grantor acknowledges that Holder has no possessory rights in the Protected Property, nor any responsibility or right to control, maintain, or keep up the Protected Property. Grantor shall retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Protected Property.

C. Limitation on Obligations of Holder. Grantor is responsible for, and Holder shall have no responsibility whatsoever for, the operation of the Property, or the monitoring of hazardous and other conditions thereon, unless expressly undertaken by separate written agreement. Notwithstanding any other provision of this Conservation Easement to the contrary, this Conservation Easement shall not be construed such that: (1) it creates in Holder the obligations or liabilities of an "owner" or "operator" as those words are defined and used in the environmental laws, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 United States Code, Sections 9601 *et seq.*) or any successor or related law; (2) it creates in Holder's obligations or liabilities of a person described in 42 United States Code Section 9607(a)(3) or any successor or related law; or (3) Holder has any control over Grantor's ability to investigate and remediate any hazardous materials associated with the Protected Property. The term "environmental laws" includes, without limitation, any federal, state, local, or administrative agency statute, regulation, rule, ordinance, order, or requirement relating to environmental conditions or hazardous substances.

X. HOLDER'S AFFIRMATIVE RIGHTS

In addition to the public access rights granted to Holder's in Section VII.F ("Access") and in Section VII.A.8 ("Maintenance of Boundaries") herein, Holder has the following additional rights:

A. Holder's Right of Entry. In a reasonable manner, Holder has the right to enter the Protected Property, including over roads owned by Grantor or rights of way or other access ways available to Grantor for access to the Protected Property, for inspection, monitoring, and enforcement purposes (see Exhibits B and C).

B. Enforcement. Holder has the right to enforce this Conservation Easement by proceedings at law and in equity, including, without limitation, the right to require the restoration of the Protected Property to a condition in compliance herewith and receive damages for irremediable harm due to violation hereof. If Holder becomes aware of a violation or threatened violation of the terms of this Conservation Easement, then Holder must give written notice to Grantor and request that Grantor take corrective action sufficient to cure the violation or prevent the threatened violation, except where emergency circumstances or prevention of a threatened breach of this Conservation Easement require more immediate enforcement action. Wherever in this Conservation Easement Grantor is afforded or retains a right to provide a plan or otherwise express an intention to take an action (regardless of whether Holder has any right to approve same), nothing in this Conservation Easement may be construed to impair Holder's right to seek injunctive or other relief as necessary to enforce the terms of this Conservation Easement against a violation or threatened violation hereof.

If a court determines that this Conservation Easement has been or is likely to be breached, Grantor will reimburse Holder for any reasonable costs of enforcement, including court costs, reasonable attorney's fees, and any other payments ordered by such

court. Nothing contained in this Conservation Easement may be construed to preclude Grantor's or Holder's rights to recover damages from any third party for trespass or other violation of their respective rights in this Conservation Easement and the Protected Property.

C. Violations by Third Parties. Holder may not bring an enforcement action against Grantor for injury to or change in the Protected Property resulting from the actions of a third party trespasser or any person who has been permitted on the Protected Property by Holder pursuant to this Easement; resulting from natural causes or environmental catastrophe beyond Grantor's control, such as insect infestation, fire, flood, storm, and earth movement; or from any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Protected Property resulting from such causes. Grantor must take all reasonable actions, consistent with customary standards for the management of comparable areas used for the same purposes as the Protected Property, to prevent or halt third parties from violating this Conservation Easement; such reasonable actions shall include informing Holder of such violations and requesting that Holder take appropriate enforcement action. Grantor and Holder, together or unilaterally, may take such action as may be reasonably necessary to remedy acts of authorized or unauthorized third parties that constitute a violation of this Conservation Easement. Furthermore, in the event of violations of this Conservation Easement caused by acts of third parties, at Holder's option, Grantor agrees to join in any suit for the purposes of pursuing enforcement action. Grantor shall remain responsible for violations of this Conservation Easement caused by acts of Grantor's employees, contractors, agents, invitees, guests, licensees, and other expressly or impliedly authorized third parties. As to violations arising from the acts or omissions of unauthorized third parties, Holder, together or unilaterally, shall have a right to enforce this Conservation Easement directly against Grantor if Grantor fails to cooperate with Holder in all reasonable respects to halt or abate the violation resulting from such acts or omissions, or fails to promptly report a known or suspected violation to Holder.

D. Signs Identifying Holder. Holder has the right, after consultation with Grantor, to install and maintain small unlighted signs visible from public vantage points, to identify the Holder and inform the public and abutting property owners that the Protected Property is under the protection of this grant.

E. Third Party Enforcement Rights. Pursuant to the Order, MDEP shall have all of the enforcement rights granted to Holder pursuant to this Section X, and shall act as a third party enforcer of this Conservation Easement.

XI. CONSERVATION EASEMENT REQUIREMENTS UNDER STATE AND FEDERAL LAWS AND REGULATIONS

A. Conservation Purposes. This Conservation Easement is established exclusively for conservation purposes consistent with the provisions of the Internal Revenue Code, as amended at Title 26, U.S.C. Section 170(h)(1-6) and Sections 2031(c), 2055, and 2522, and under Treasury Regulations at Title 26 C.F.R. §1.170A-14 *et seq.*, as amended.

B. Alternative Qualified Holder. Holder is qualified to hold conservation easements pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3).

C. Assignment Limitation. The burden of the Conservation Easement created hereby shall run with the Protected Property and is enforceable against all future owners in perpetuity. The benefits of this Conservation Easement are not appurtenant to any particular parcel of land but are in gross.

This Conservation Easement may be transferred or assigned only to a qualified holder pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3) that is willing and able to hold this Conservation Easement for the Conservation Purposes and expressly agrees to assume the responsibility imposed on by the terms of this Conservation Easement. Any such assignee or transferee has the like power of assignment or transfer; provided, however, that any such further transfer or assignment is subject to the prior written approval of the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto). If the then-current Holder of this Conservation Easement ever ceases to exist or fails to carry out the responsibility imposed on the Holder by the terms of this Conservation Easement, then the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto), in consultation with Grantor, will identify and select an appropriate entity to which this Conservation Easement may be transferred. Any assignment or transfer of responsibility for the Conservation Easement must be in a recordable form and must be recorded in the Somerset County Registry of Deeds.

D. Termination and Proceeds. This Conservation Easement may only be extinguished or terminated by judicial order in a court of competent jurisdiction. It is the intention of the parties that any extinguishment or termination be approved by a court only if all of the Conservation Purposes of this Conservation Easement are impossible to accomplish, and if Grantor, Holder, and MDEP agree.

Grantor and Holder agree that the grant of this Conservation Easement gives rise to a property right which vests immediately in Holder and which has a fair market value equal to the amount by which the fair market value of the Protected Property immediately before the imposition of this Conservation Easement is reduced by the restrictions imposed by this Conservation Easement, as of the date of the execution of this Conservation Easement (the Original Percentage Reduction).

If either Holder or Grantor receive notice of the actual or threatened exercise of the power of eminent domain (hereinafter a "Taking") with respect to any interest in or any part of the Protected Property, the party who receives the notice shall promptly notify the other and the parties may proceed jointly or either party may at its discretion take such legal action as it deems necessary to: (i) challenge the Taking; (ii) challenge the amount of allocation of any award tendered by the Taking authority; or (iii) otherwise participate

in, challenge, or appeal such proceedings, findings, or awards. Any third party counsel and consultants (including appraisers) hired by either party shall be reasonably acceptable to the other party. Each party shall be responsible for its own costs and legal fees, absent written agreement of the parties.

Should this Conservation Easement be terminated or extinguished as provided in this Section XI.D, in whole or in part, Holder shall be entitled to be paid no less than a portion of any proceeds of sale, exchange, or lease computed as to the greater of (i) the Original Percentage Reduction as required under U.S. Treasury Regulations at 1.170-A-14(g)(6)(ii); or (ii) the increase in value of the Grantor's property interest resulting from such extinguishment, as determined by the court, or in the absence of such court determination, by the agreement of the parties or, in the absence of such agreement, by an independent appraiser mutually selected by Grantors and Holder. Holder shall use its share of the proceeds or other moneys received under this paragraph in a manner consistent, as nearly as possible, with the stated, publicly beneficial Conservation Purposes of this Conservation Easement.

E. Amendment. This instrument sets forth the entire agreement of the parties with respect to this Conservation Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Easement. Holder and Grantor, with the approval of MDEP, may amend this Conservation Easement to enhance the Conservation Values of the Protected Property or add to the restricted property, provided that no amendment shall (i) affect this Conservation Easement's perpetual duration, (ii) conflict with or be contrary to or inconsistent with the Conservation Purposes of this Conservation Easement, (iii) reduce the protection of the Conservation Values of the Protected Property, (iv) affect the qualification of this Conservation Easement as an "interest in land" or (v) affect the status of Holder as a "qualified organization." No amendment shall be effective unless the amendment complies with 33 M.R.S. § 477-A and is documented in a notarized writing executed by Holder, Grantor, and MDEP and is recorded among the land records of the County or Counties in which the Protected Property is located.

XII. GENERAL PROVISIONS

A. Applicable Law. This Conservation Easement is created pursuant to Maine's Conservation Easement statute 33 M.R.S. §§ 476 – 479-C, inclusive, as amended, and must be construed in accordance with the laws of the State of Maine and in accordance with the Conservation Plan.

B. Interpretation. If uncertainty should arise in the interpretation of this Conservation Easement, judgment should be made in favor of accomplishing the Conservation Purposes. Nothing in this Conservation Easement should be construed to permit any activity otherwise prohibited by law, nor to prohibit the imposition of further land use restrictions by agreement of the parties (provided that such further land use restrictions shall be consistent with the Conservation Purposes) or by operation of law.

C. Non-Waiver. The failure or delay of Holder, for any reason whatsoever, to discover a violation or initiate an action to enforce this Conservation Easement does not constitute laches, a waiver, or estoppel of its rights to do so at a later time. No act or failure to act by or on behalf of Holder, including failure to provide notice of a violation in accordance with Section X ("Holder's Affirmative Rights"), may be construed to constitute an approval, waiver, or estoppel in connection with Holder's rights to enforce the terms of this Conservation Easement.

D. Compliance. A party's obligation as Grantor, or successor owner of the Protected Property, will cease, if and when such person or entity ceases to have any present, partial, contingent, collateral, or future interest in the Protected Property, but only to the extent that the Protected Property is then in compliance with this Conservation Easement.

Responsibility of Grantor for breaches of this Conservation Easement that occur prior to transfer of title will survive such transfer; provided that the new owner shall also be responsible for bringing the Protected Property into compliance unless Holder releases the new owner. In certifying Grantor's compliance with the Forest Management Plan, the State may request, at Grantor's cost, current stand-typing information (forest type-size-density classes) and information on timber harvest levels by species group that has occurred since the date of the then-current Forest Management Plan. At Grantor's cost, Holder will provide certificates to third parties, indicating the extent to which, to Holder's knowledge, there is compliance of the Protected Property with the terms of this Conservation Easement or compliance on the part of Grantor with any obligation hereunder. Such certificate shall be delivered within thirty (30) days of Grantor's request and shall speak to the condition of the Protected Property as of the Holder's most recent inspection. If Grantor requests the certificate to be as of a more recent inspection date, the Holder shall conduct an inspection within forty-five (45) days of receipt of Grantor's written request thereof, which shall be at Grantor's cost.

E. Severability. If any provision of this Conservation Easement or the application of any provision to a particular person or circumstance is found to be invalid, the remainder of this Conservation Easement and the application of such provision to any other person or in any other circumstance remain valid.

F. Standard for Holder Granting Discretionary Consent and Providing Prior Written Approval. Grantor and Holder acknowledge that, in view of the perpetual nature of this Conservation Easement, they are unable to foresee all potential future land uses, future technologies and future evolution of the land and other natural resources, and other future occurrences affecting the Conservation Purposes. Holder may determine whether (a) proposed uses or proposed improvements not contemplated by or addressed in this Conservation Easement or (b) alterations in existing uses or structures, are consistent with the Conservation Purposes. To make such determinations and when otherwise determining whether to provide its prior written approval when required by this Easement, the following standard applies: Holder may grant discretionary consent or provide prior written approval only if Holder has determined in its reasonable discretion that the proposed use is consistent with the Conservation Purposes, substantially conforms

to the intent of this grant, meets any applicable conditions expressly stated herein, is consistent with the Conservation Plan, and does not result in a material, adverse impact on the Conservation Values of the Protected Property. Holder has no right or power to consent to any use that would result in building development on the Protected Property other than that which is expressly allowed herein, or that would be inconsistent with the Conservation Purposes or limit the term or terminate this Conservation Easement, or that would impair the qualification of this Conservation Easement or the status of Holder under any applicable laws, including 33 M.R.S. §§ 476 *et seq.*, and Section 170(h) or 501(c)(3) of the Internal Revenue Code, or successor provisions thereof.

G. Liens Subordinated. Grantor represents that as of the date of this grant there are no liens or mortgages outstanding against the Protected Property, except as listed in Exhibit A, and that such liens are subordinated to Holder's rights under this Conservation Easement. Grantor has the right to use the Protected Property as collateral to secure the repayment of debt, provided that any lien or other rights granted for such purpose are subordinate to Holder's rights under this Conservation Easement. Grantor must provide documentation of such subordination to Holder. Under no circumstances may Holder's rights be extinguished or otherwise affected by the recording, foreclosure, or any other action taken concerning any lien or other interest in the Protected Property.

H. Protections, Rights, and Immunities. Nothing in this Conservation Easement shall be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A (Maine's recreational use statute), 14 M.R.S. §§ 8101-8118 (the Maine Tort Claims Act), or any other applicable provision of law or equity. Holder specifically claims and retains all such protections, rights, and immunities.

I. Standing to Enforce. Nothing herein should be construed to grant the public standing to bring an action hereunder, nor any rights in the Protected Property by adverse possession or otherwise, provided that nothing in this Easement shall affect any existing public rights in or to the Protected Property acquired by common law, adverse possession, prescription or other law, independently of this grant. Nothing in this Section XII.I shall limit the third-party enforcement rights provided to MDEP pursuant to Section X.E.

J. Holder's Ability to Exercise Rights. The parties acknowledge that the ability of Holder to exercise the rights or carry out the duties of Holder hereunder, including, without limitation, the installation, operation, and maintenance of any recreational improvements on the Protected Property, are subject to the availability of moneys appropriated or otherwise available to Holder and designated for such purposes. Nothing in this Conservation Easement creates any obligation on behalf of Holder in excess of such availability of moneys appropriated or otherwise available to Holder.

K. Certain Rights Preserved. Without limiting Grantor's rights to prohibit third parties from engaging in activities that may result in claims adverse to Grantor's interest in the Property, and without acknowledging the validity of such claims of third parties that may exist now or in the future, this Conservation Easement shall not impair any existing

prescriptive right in the Property that may have been acquired by the public or Holder prior to the date of this Conservation Easement, or any other right the public or Holder may have to use or access the Protected Property pursuant to law.

L. Subsequent Transfers.

(a) Sale Subject to Conservation Easement. Except as specifically provided herein, nothing in this Conservation Easement shall be construed to prevent Grantor from selling or otherwise conveying or transferring the Protected Property to a third party, subject to the terms of this Conservation Easement.

(b) Incorporation of Conservation Easement Terms. Grantor must incorporate the terms of this Conservation Easement by reference in any deed or other legal instrument by which Grantor divests itself of the Protected Property. Further, Grantor must notify Holder of the transfer of the Protected Property at least thirty (30) days prior to the date of such transfer. Grantor must provide a complete copy of this Conservation Easement to any transferee of any rights in the Protected Property before any such transfer and must provide Holder with a copy of any transfer documentation upon completion of such transfer. The failure of Grantor to perform any act required by this paragraph shall not impair the validity of this Conservation Easement or limit its enforceability in any way.

Notwithstanding anything to the contrary herein, the conveyance of the Protected Property includes all appurtenant rights associated with the Protected Property, including any and all rights of access thereto. In addition, upon conveyance of all or any portion of the Protected Property, consistent with the requirements in Section VII.B.1, Grantor may reserve rights of access across the lands so conveyed or other rights and easements for the benefit of Grantor's retained lands.

[signatures on the following pages]

XIII. HABENDUM AND SIGNATURES

TO HAVE AND TO HOLD the said Conservation Easement unto the said Holder and their successors and assigns forever.

IN WITNESS WHEREOF, _____ has caused this Conservation Easement to be executed by its duly authorized representative as of this ___ day of _____, 2025.

Signed, sealed and delivered
in the presence of: _____

_____ By: _____
Name:
Its:
Hereunto duly authorized

State of Maine
County of _____, ss. _____ ____, 2025

Personally appeared the above named _____, in his capacity as the _____of _____ and acknowledged the foregoing instrument to be his free act and deed in his said capacity, on behalf of said _____.

Before me,

_____
Notary Public/Maine Attorney-at-Law
Name: _____

XIV. ACCEPTANCE BY STATE

Pursuant to 12 M.R.S. § 1850(1) & 33 M.R.S. § 477(2), Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, hereby accepts this Conservation Easement on behalf of the STATE OF MAINE.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE, Bureau of Parks and Lands
Department of Agriculture, Conservation and Forestry

By: _____
Andrew R. Cutko
Its Director, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

Pursuant to 33 M.R.S. § 477(2) and 38 M.R.S. § _____, Melanie Loyzim, Commissioner of the Department of Environmental Protection, hereby accepts the third-party enforcement rights contained in this Conservation Easement on behalf of the Department of Environmental Protection.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered **Department of Environmental Protection**

By: _____
Melanie Loyzim
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Melanie Loyzim, Commissioner of the Department of Environmental Protection and acknowledged acceptance of the above and foregoing instrument to be her free act and deed in her said capacity, and the free act and deed of the Department of Environmental Protection.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XV. CONSENT OF COMMISSIONER

Pursuant to 12 M.R.S. § 1850(1), the Commissioner of the Department of Agriculture, Conservation and Forestry, hereby gives consent to acquisition by the STATE OF MAINE, Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, of the above and foregoing Conservation Easement.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE
Department of Agriculture, Conservation and Forestry

By: _____
Amanda E. Beal
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Amanda E. Beal, Commissioner of the Department of Agriculture, Conservation and Forestry, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XVII. ATTACHMENTS TO CONSERVATION EASEMENT

EXHIBIT A – Legal Description of the Protected Property

EXHIBIT B – Survey Plan of the Protected Property

EXHIBIT C – Map of Roads and Trails

EXHIBIT D – Map of Wetlands and Streams

EXHIBIT E – Existing Plantations located on the Protected Property

Exhibit A

Legal Description of the Protected Property

Exhibit B

Survey Plan of the Protected Property

Exhibit C

Map of Roads and Trails

Exhibit D

Map of Wetlands and Streams

Exhibit E

Existing Plantations located on the Protected Property

Attachment 2

Preliminary Consent

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BUREAU OF PARKS AND LANDS
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

May 5, 2025

Melanie Loyzim
Commissioner, Maine Department of Environmental Protection
17 State House Station
30 Blossom Lane
Augusta, ME 04333

Re: Conservation Requirements related to the New England Clean Energy Connect ("NECEC") transmission line – Preliminary Consent of Holder

Dear Commissioner Loyzim,

The Maine Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands ("the Bureau"), provides its preliminary consent, as set forth below, to hold a conservation easement that NECEC will submit to the Maine Department of Environmental Protection as part of NECEC's Conservation Plan, which Conservation Plan is required by the Maine Department of Environmental Protection ("the DEP") Order dated May 11, 2020, and the Maine Board of Environmental Protection Order dated July 21, 2022 (collectively, "Orders").

More specifically, the Bureau and Weyerhaeuser, Inc. recently negotiated the terms of a perpetual conservation easement that, assuming Bureau approval of the Exhibits and final DEP approval of NECEC's Conservation Plan, the Bureau is prepared to hold on approximately 50,233 acres owned by Weyerhaeuser. The negotiated conservation easement is designed to comply with the Orders' relevant terms and be administratively feasible for the Bureau to hold. If the DEP's regulatory process results in significant changes to the easement terms that the Bureau and Weyerhaeuser have negotiated, the Bureau will need to review such changes before agreeing to hold such modified conservation easement.

Please let me know if you have questions.

Sincerely,

Andy Cutko
Director

ANDREW R. CUTKO, DIRECTOR
BUREAU OF PARKS AND LANDS
18 ELKINS LANE, HARLOW BUILDING

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-3821
FAX: (207) 287-6170
WEB: WWW.MAINE.GOV/DACF

cc: Amanda Beal, Commissioner, Department of Agriculture, Conservation and Forestry
Rob Wood, Director of Land and Water Bureau, Department of Environmental Protection
Nate Webb, Director of the Wildlife Division, Dpt. of Inland Fisheries and Wildlife
Molly Docherty, Director, Maine Natural Areas Program
Lauren E. Parker, Assistant Attorney General
Avery Day, Esq., Stevens & Day, LLP
Ben Dow, Weyerhaeuser
Meline MacCurdy, Esq., Weyerhaeuser
Craig Nale, Central Maine Power
Gerry Mirabile, New England Clean Energy Connect
Lisa Gilbreath, Esq., Pierce-Atwood, LLP

Attachment 3

Draft Forest Management Plan

Forest Management Plan

for the

New England Clean Energy Connect

Upper Kennebec Conservation Easement

May 2025

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EXHIBIT D-1

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October 7, 2025

VIA MELS PORTAL

Ms. Dawn Hallowell
Maine Department of Environmental Protection
Bureau of Land Resources
17 State House Station
Augusta, ME 04333-0017

Re: Condition Compliance Submission for Condition #39 of Maine Department of Environmental Protection Site Location/NRPA Permit Numbers #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 and for Condition #10 of the Maine Board of Environmental Protection Permit Numbers L-27625-26-F-Z, L-27625-TG-G-Z, L-27625-2C-H-Z, L-27625-VP-I-Z, L-27625-IW-J-Z, L-27625-26-AB-Z for the New England Clean Energy Connect Project

Dear Ms. Hallowell:

On behalf of NECEC Transmission LLC (NECEC LLC), in compliance with Condition #39 of the May 11, 2020 Maine Department of Environmental Protection Order and Condition #10 of the July 21, 2022 Maine Board of Environmental Protection Order for the New England Clean Energy Connect Project, please find enclosed the following materials:

- Clean revised Conservation Easement (and all exhibits thereto), Attachment A
- Redline format Conservation Easement (redline comparison of August 1, 2025 Conservation Easement filing), Attachment B

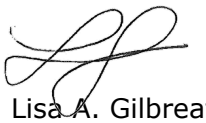
The redline format shows the revisions that were made to accommodate the DEP's October 3, 2025 request to revise the "Mature Forest" definition, and references within the Conservation Easement, as follows:

> "Mature Forest" is defined as a forest stand consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees.

Grantor Weyerhaeuser Company and Holder Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands have approved this revised easement. NECEC LLC further incorporates these revisions into the Conservation Plan filed on May 9, 2025.

Please let me know if you have any questions.

Sincerely,



Lisa A. Gilbreath

Enclosures
cc (via email): Service List (last updated 2025)

ATTACHMENT A
CONSERVATION EASEMENT
(CLEAN)

NEW ENGLAND CLEAN ENERGY CONNECT SEGMENT 1 CONSERVATION EASEMENT

I. PROJECT NAME

New England Clean Energy Connect Segment 1 Conservation Easement

II. WORDS OF CONVEYANCE

Weyerhaeuser Company, having an address of 220 Occidental Avenue South, Seattle, WA 98104, (referred to as the "Grantor", which word shall, unless the context clearly indicates otherwise, include the above-named Grantor, its successors and assigns), for consideration paid and not as a gift, HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands** (the "State," which word shall, unless the context clearly indicates otherwise, include the State's successors and assigns, or "Holder"), a governmental entity having a mailing address of 22 State House Station, Augusta, Maine 04333 with QUITCLAIM COVENANT:

A. in perpetuity, the following described conservation easement (the "Conservation Easement" or the "Easement") on, over, under, and across the real property in Bradstreet Township, Parlin Pond Township, and Johnson Mountain Township, Somerset County, Maine, more particularly described in Exhibit A, subject to those exceptions to title set forth therein (the "Protected Property"), and generally depicted on the plan attached hereto and made a part hereof as Exhibit B as set forth below. Provided that within twenty-four months of the conveyance of this Conservation Easement from Grantor to Holder, a boundary line survey shall be completed of the Protected Property that also depicts any and all of the then-existing following located on the Protected Property: rights-of-way, roads, and structures and other improvements. Said survey shall be recorded as soon as practicable after completion and, upon recording, shall be incorporated herein and act as an amendment to this Conservation Easement to replace Exhibit B;

B. non-exclusive easement for Holder's pedestrian and vehicular access to the Protected Property as necessary or appropriate to exercise Holder's rights of monitoring and enforcement of the Easement hereunder, over:

    1. any and all rights-of-way and roads owned by Grantor, as more particularly described in Exhibit A and depicted on Exhibit B; and

2. any and all rights-of-way and roads owned by third parties over which Grantor has rights of access to the Protected Property to the extent that Grantor has the right to grant the same.

C. a non-exclusive right of public pedestrian access on and across the Protected Property for purposes of Non-Intensive Outdoor Recreation.

Grantor further HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Environmental Protection**, a governmental entity having a mailing address of 17 State House Station, Augusta, Maine 04333, third party enforcement rights of the Conservation Easement as set forth in Section X.

III. DEFINITIONS

A. "Alternative Qualified Holder" is defined in Section XI.B.
B. "Baseline Documentation" is defined in Section VII.A.5.
C. "Best Management Practices" are those forest management practices set forth in the publication entitled "Best Management Practices for Forestry: Protecting Maine's Water Quality," prepared by the Maine Department of Agriculture, Conservation and Forestry, Bureau of Forestry, in such publication's current version at the time of the grant of this Conservation Easement, and as the same may be further amended, supplemented, or replaced after the date of this grant.
D. "Commercial Forest Management Activities" include Commercial Forestry and timber cruising; resource evaluation; herbicide, pesticide, and fertilizer application; timber stand improvement; pruning; mechanical timber harvesting and other forest harvesting; wood chip production; forest products transportation; natural regeneration of forest stands; prevention of fire and disease; eradication of invasive species; wildlife habitat improvement; general maintenance of forest health and biological diversity; maple sugaring; forest carbon sequestration; forest carbon credit sales (consistent with Section VII.A.4); other substantially similar and associated activities; and the construction, creation, use, and maintenance of Land Management Roads, skid trails and Winter Haul Roads, turnouts, timber landings, and crossings of flowing waters for such purposes, all as consistent with the terms of this Conservation Easement.
E. "Commercial Forestry" is defined as the planting, growing, cultivation, stocking, and harvesting of trees and other forest products to produce marketable forest products.
F. "Conservation Plan" is defined in the Maine Department of Environmental Protection ("MDEP") Findings of Fact and Order, issued May 11, 2020, and the Maine Board of Environmental Protection ("MBEP") Findings of Fact and Order, issued July 21, 2022.
G. "Conservation Values" are defined in Section V.
H. "Forestland" is defined as land stocked with trees of any size or land formerly having had such tree cover that is being managed to return to forest cover.
I. "Force Majeure Event" is defined in Section VII.A.6.
J. "Forest Management Plan" is defined in Section VII.A.6.a.
K. "Grantor" is defined as the owner in fee simple of the real property that is subject to this Conservation Easement. The term "Grantor" shall include Grantor, its successors and

assigns, and their respective authorized agents, contractors, and employees, and where specifically set forth herein, licensees, and lessees of Grantor, its successors and assigns.

L. “Land Management Road” is defined as a route or track consisting of a bed of exposed mineral soil, gravel, or other surfacing material constructed for, or created by, the repeated passage of motorized vehicles and used primarily for forest management activities (refer to Exhibit C), but such definition does not include log landings, skid trails, skid roads, and Winter Haul Roads.

M. “Mature Forest” is defined as a forest stand consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees.

N. “Mature Forest Goal” is defined in Section VII.A.6.

O. "Milestones" is defined in Section VII.A.6.

P. “MNAP” means the Maine Natural Areas Program, which is part of the Maine Department of Agriculture, Conservation and Forestry, or any successor State program or bureau that performs similar public functions.

Q. “MDIFW” means the Maine Department of Inland Fisheries and Wildlife, or any successor State agency or bureau that performs similar functions.

R. “NECEC” is defined as the New England Clean Energy Connect Transmission Line that runs from the Canadian border in Beattie Township, Maine to the point of interconnection to the New England power grid in Lewiston, Maine.

S. “Non-Intensive Outdoor Recreation” is defined as dispersed, non-commercial, non-exclusive, non-motorized individual or small group recreational activities that do not generally rely on buildings or spectator facilities. Such uses include hunting, fishing, trapping, hiking, nature observation, picnicking, boating, cross country skiing, snow-shoeing, dog sledding, bicycling (including electric bicycles), horseback riding, swimming, primitive non-commercial camping, and outdoor education and nature study, and enjoyment of open space; provided that the incidental use of the Protected Property by the public for these purposes supported by paid guides or outfitters is not commercial or exclusive use. The establishment by Grantor of permits and collection of access fees for use of campsites and other recreational facilities permitted under this Conservation Easement is also not commercial or exclusive use.

T. “Normal high watermark of the shore” is defined as that line on the shore of water bodies which is apparent from visible markings, changes in the character of the soils due to the prolonged action of the water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial land. In places where the shore or bank is of such character that the high watermark cannot be easily determined (rockslides, ledges, rapidly eroding or slumping banks), the normal high watermark will be estimated from places where it can be determined by the above method. Distances from the normal high watermark will be determined by horizontal measurement.

U. “Permitted Excavation Activities” is defined in Section VII.D.3.

V. “Plantation” is defined as stands that are artificially regenerated via intentional planting methods.

W. “Protected Property” is defined in Section II.A.

X. "Productive Forest Acres" are defined as any area capable of growing a crop of trees that can reach Mature Forest conditions. These areas will generally have a site index of 40 or greater or, at a minimum, the ability to support trees greater than 50 feet in height.

Y. "Riparian Habitat Management Standards" are those standards for riparian areas contained in Section VII.A.6.

Z. "Segment 1" is defined as the portion of the NECEC that runs from Beattie Township, Maine to The Forks Plantation, Maine.

AA. "The Order" is defined as the MDEP Findings of Fact and Order, issued May 11, 2020, permitting construction of the NECEC, and the MBEP Findings of Fact and Order, issued July 21, 2022, affirming and amending the May 11, 2020, MDEP Findings of Fact and Order.

BB. "The Parties" is defined as Grantor, Holder, and MDEP, for third party enforcement purposes.

CC. "Wetland" means any area saturated or inundated by water at a frequency or for a duration sufficient to support, and which under normal circumstances does support, vegetation typically adapted for life in saturated soils. In most cases, this would include areas below a recognizable debris line resulting from recurring, not extreme, water action. The "upland edge" of a wetland is the boundary between the upland and wetland, and not the edge of open water. Refer to Exhibit D for a map of wetlands and streams existing at the time of recording this Easement.

DD. "Winter Haul Road" means a route or travel way that is utilized for Commercial Forest Management Activities conducted exclusively during frozen ground conditions. Winter Haul Roads must follow applicable Best Management Practices.

IV. PURPOSES

The purposes of this Conservation Easement (the "Conservation Purposes") are to conserve in perpetuity habitat in the vicinity of NECEC Segment 1 with sufficient Mature Forest acreage to mitigate and offset the effects of habitat fragmentation associated with the construction and maintenance of NECEC Segment 1, including the related edge effect; to promote habitat connectivity and conservation of Mature Forest areas; and to provide conservation compensation for the NECEC.

The Conservation Purposes of this Conservation Easement are also to ensure the forests on the Protected Property are managed to maintain a healthy, biologically diverse, productive, and Mature Forest with diverse age classes; to conserve in perpetuity the Conservation Values of the Protected Property including wildlife and ecological values; to conserve water quality, wetlands, and riparian values; and to provide guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation.

Grantor covenants that no acts or uses that are inconsistent with the Conservation Purposes shall be conducted on the Protected Property.

V. RECITALS

The following recitals (the "Recitals") more particularly describe the conservation attributes and Conservation Values of the Protected Property and the significance of this grant:

WHEREAS, Grantor is the sole owner in fee simple of 50,063 +/- acres of real property in Somerset County, as the same is described in Exhibit A, and wishes to convey a Conservation Easement over the 50,063 +/- acre Protected Property, which consists of substantially undeveloped forested land;

WHEREAS, the Protected Property is in the vicinity of Segment 1;

WHEREAS, in connection with the NECEC, the MDEP and the MBEP issued the Order;

WHEREAS, because of the impacts of the NECEC, the Order requires NECEC Transmission LLC to permanently conserve 50,000 acres of land in the vicinity of Segment 1 to, among other things, ensure the protection of wildlife;

WHEREAS, the Order requires NECEC to create and implement a Conservation Plan, as described and defined in the Order;

WHEREAS, the Conservation Plan has as its primary goal compensation for the fragmenting effect on habitat of the NECEC, and the related edge effect, by promoting habitat connectivity and conservation of Mature Forest areas;

WHEREAS, the Order allows commercial timber operations on the Protected Property provided that such operations are consistent with the conservation of Mature Forest areas;

WHEREAS, the Protected Property is desirable for conservation in furtherance of the goals of the Conservation Plan and includes the following conservation values to be conserved (collectively, the "Conservation Values"):

a. The Protected Property is a predominately forested land area of significant breadth and diversity, with outstanding values including sizeable Mature Forests, large blocks of wildlife and plant habitat, rare, threatened, and endangered species and their associated habitat, extensive bogs, wetlands, rivers, streams, lakes, remote ponds and other water bodies, and unique natural features, all of which are further quantified and delineated in the Baseline Documentation.

b. The Protected Property has ecological importance as wildlife and fisheries habitat. Conservation of the Protected Property under the terms of this Conservation Easement, by prohibiting development of the Protected Property in excess of that allowed under this Conservation Easement, will have a permanent, beneficial impact on the ecological benefits of such areas and species.

c. The Protected Property provides habitat that is suitable for diverse wildlife species of conservation interest, including mammals such as pine marten and white-tailed deer, as well as brook trout, landlocked salmon, other fish, and many species of forest interior dwelling birds, waterfowl, reptiles, and amphibians.

d. The Protected Property contains identified recreational areas important to the people of the State of Maine, and guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation in perpetuity, consistent with the preservation and protection of the other values of the Protected Property and Grantor's reserved rights, is in the public interest;

WHEREAS, subject to the terms of this Conservation Easement and an approved Forest Management Plan, the continued management of the Protected Property as a dynamic landscape at different stages of growth, ages, and composition to develop and conserve Mature Forest is compatible with the preservation and promotion of habitat connectivity, minimizes fragmentation of forest ecosystems, and provides more permanent forest and habitat resiliency;

WHEREAS, pursuant to 33 M.R.S. § 476(2)(A) and 12 M.R.S. § 1850(1), Holder may acquire and hold a conservation easement on the Protected Property, which conservation easement is a component of the Conservation Plan required by the Order;

WHEREAS, the Parties have prepared and completed the Baseline Documentation at the time of the recording of this Conservation Easement, which, in accordance with Section VII.A.5, is intended to serve as an objective, although not exclusive, information baseline for monitoring compliance with the terms of this Conservation Easement;

WHEREAS, the Parties desire to implement certain restrictions on the use of the Protected Property, impose obligations on Grantor and any future owners of the Protected Property, and grant rights to Holder, and the MDEP, with respect to the Protected Property, in perpetuity, as set forth in this Conservation Easement; and

WHEREAS, the MDEP, has approved this Conservation Easement by order dated _____.

VI. INCORPORATION OF PURPOSES AND RECITALS

NOW THEREFORE, in consideration of the foregoing Conservation Purposes and Recitals, and for the benefit of the public, the Parties have established this Conservation Easement on, over, under, and across the Protected Property consisting of the following terms, covenants, and restrictions, which shall run with and bind the Protected Property in perpetuity.

VII. RESTRICTIONS AND RESERVED RIGHTS

Except for the rights expressly conveyed by this Conservation Easement to Holder (hereinafter "Holder's Affirmative Rights"), and except for the restrictions stated in this Conservation Easement, Grantor retains all ownership rights in the Protected Property and may use the Protected Property for any lawful purpose, including, without limitation, those uses expressly reserved by Grantor herein (hereinafter "Grantor's Reserved Rights"), provided that any such use is consistent with the Conservation Purposes of this Conservation Easement. Any activities on or uses of the Protected Property that are inconsistent with the Conservation Purposes are prohibited. Without limiting the generality of the foregoing, the following restrictions and other terms are applicable to the Protected Property.

A. LAND USE

1. **Limitations on Development; Exceptions.** Residential, industrial, and commercial activities and development, quarrying, mining, mineral development, alteration of watercourses and water bodies, and building development activities are prohibited on the Protected Property, except as permitted for the authorized uses in this Conservation Easement, including but not limited to: Commercial Forest Management Activities (see Section VII.A.6), Permitted Excavation and Use of Gravel, Sand, and Rock, (see Section VII.D.3), Ecosystem Service Markets (see Section VII.A.4), Forest and Vegetation Management (see Section VII.E), Incidental Operations (see Section VII.E) and for the enhancement of Non-Intensive Outdoor Recreation as defined herein and other activities expressly permitted by this Conservation Easement or reserved by Grantor.

   Without limiting the generality of the foregoing restriction, except as currently exists as reflected in the Baseline Documentation, residential housing units, condominiums, trailer parks, mobile homes, high-intensity lighting, motels or hotels, commercial advertising, billboards, towers, antennas or equipment for telecommunications or radar, solar power or wind power structures or transmission lines, and use of the Protected Property as an aircraft landing site except in an emergency, are all specifically prohibited.

2. **Storage and Disposal of Waste; Organic Matter; Hazardous Substances Associated with Commercial Forest Management.** Discharge of wastewater into surface or ground waters on or under the Protected Property is prohibited. It is forbidden to dispose of, or store, on the Protected Property, rubbish, garbage, building debris, unserviceable vehicles and equipment or parts thereof, hazardous or other waste, hazardous or toxic substances, or other unsightly or offensive waste material. Except that organic matter and logging slash generated on the Protected Property, but not elsewhere, may be used, stored, or disposed of on the Protected Property as part of Commercial Forest Management Activities. Other waste generated by permitted uses on the Protected Property may be stored temporarily in appropriate containers for removal at reasonable intervals, all in accordance with applicable state, local, and federal law. Notwithstanding the foregoing, fuel and other hazardous or toxic substances used in the ordinary course of conducting Commercial Forest

Management Activities on the Protected Property may be stored thereon in accordance with applicable state, local, and federal laws and regulations.

3. **Limitations on Additional Easements and Other Rights.**

   (a) Access and Utility Easements. With respect to State Route 201, Holder may provide its prior written approval if such easement rights minimize adverse impacts to the Conservation Values and Holder determines that such easement rights are: (1) necessary for the Maine Department of Transportation to comply with federal or state law or (2) necessary for public safety.

   (b) Leases and Licenses. No new leases, licenses, or other interests in land that establish a right-of-way, corridor of ingress or egress, driveway, road, utility distribution or service line, or tower shall be granted, constructed, developed, or maintained into, on, over, under, or across the Protected Property without the prior written approval of the Holder. Notwithstanding the foregoing, advanced notice to Holder shall not be required for short-term and temporary licenses or leases across existing rights-of-way or land, so long as such licenses or leases do not include any land-clearing activities. For purposes of this Section VII.A.3(b), short-term and temporary means less than three years. Sugar bush leases may be granted, provided that Grantor obtains the Holder's prior written approval.

   (c) Conservation Easements. No additional conservation easements or deed restrictions shall be placed on the Protected Property without the prior written approval of the Holder.

4. **Ecosystem Service Markets.** Grantor may participate in ecosystem service market programs, including but not limited to carbon credit programs and stream, wetland, and species mitigation credit programs, that are consistent with this Conservation Easement and that do not affect Holder's right of enforcement of the Conservation Easement.

5. **Baseline Documentation.** To describe the present condition of the Protected Property and its relevant natural features, resources, and conditions, Grantor and Holder have established an inventory of the same (the "Baseline Documentation") and have certified the same as an accurate representation of the condition of the Protected Property as known to them as of the date of this grant. The Baseline Documentation is incorporated into this Conservation Easement by reference.

   Holder will prepare addenda to the Baseline Documentation from time to time to document changes to the Protected Property. Such addenda will become a part of the Baseline Documentation upon the mutual approval of Grantor and Holder. Holder will forward copies of such addenda to Grantor for Grantor's records. Holder also shall provide to MDEP, upon request, copies of the then-current Baseline Documentation with all applicable addenda.

6. **Land Uses in Accordance with a Forest Management Plan, Best Management Practices, and Applicable Laws and Regulations.**

To establish and maintain in perpetuity wildlife travel corridors along riparian areas and between Mature Forest habitat, a 100-foot no-harvest buffer must be maintained around all perennial streams and associated open wetlands as depicted in the Baseline Documentation beginning at the normal high-water line (up to no more than approximately 2,400 acres), and management must be maintained for continuous Mature Forest habitat from 100 feet to 330 feet from the normal high water line (up to no more than approximately 4,500 additional acres). Harvesting equipment crossings of these perennial streams is prohibited, except to construct road or skid trail crossings, as described in the Annual Report described in subsection VII.E.1(c)ii., to facilitate Commercial Forest Management Activities, in which case those crossings will be minimized and constructed to protect streambank integrity (all of the preceding in this paragraph being "Riparian Habitat Management Standards").

At a minimum, Commercial Forest Management Activities must result in 50% of the Productive Forest Acres as identified in the Baseline Document and Forest Management Plan of the protected property with a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees where present prior to management activity no later than December 31, 2065, and thereafter in perpetuity (the "Mature Forest Goal"). Progress toward the Mature Forest Goal will be made at the following rates: 13% in 2025, 20% in 2035, 30% in 2045, 40% in 2055, and 50% in 2065 (collectively, "Milestones"). Progress toward reaching the Milestones and Mature Forest Goal will be provided to Grantor in annual progress reports and, as necessary, addressed in updates to the Forest Management Plan. Holder has the right to seek verification of Grantor's measurements toward reaching the Milestones and Mature Forest Goal, provided that such verification is performed by the Maine Forest Service or another third party agreed to by Grantor. Notwithstanding the above, Grantor and the Holder agree that in the event that a hurricane, fire, flood, drought, disease, or forest health pest outbreak causes or substantially contributes to the failure of Grantor to meet the Milestones or Mature Forest Goal ("Force Majeure Event"), then Grantor shall not be found in non-compliance with this Conservation Easement. Following such an event, the Grantor and Holder shall work cooperatively to revise the Forest Management Plan in furtherance of the Conservation Values of this Conservation Easement, which may include deferring further harvests until the Mature Forest Goals are met. Any further harvesting shall require prior written approval of the Holder and give priority to restoring progress towards the Milestones and the Mature Forest Goal.

A Forest Management Plan (the "Forest Management Plan") must be developed for the Protected Property as required by the Order. All permitted land use activities on the Protected Property must be conducted in accordance with applicable local, state, and federal laws and regulations and Best Management Practices, in a manner consistent with

the Purposes and other terms of this Conservation Easement, and in conformity with the Forest Management Plan.

(a) Forest Management Plan. As of the date of this Conservation Easement, Grantor has submitted a 10-year Forest Management Plan, for Holder approval, that meets the requirements set forth in this Section VII.A.6. The Forest Management Plan has been prepared for Grantor by one or more professional foresters licensed in the State of Maine and has been approved by the Holder and MDEP as consistent with the terms of this Conservation Easement. All permitted land use activities on the Protected Property, including Commercial Forest Management Activities, must be conducted in accordance with the approved Forest Management Plan, except for preliminary resource evaluation. Updates to the Forest Management Plan must be completed every ten years and prepared by a professional forester licensed in the State of Maine and must comply with the requirements of this Conservation Easement. The Grantor must provide to Holder a copy of the Forest Management Plan. As specified in Section VII.A.6(f), Grantor must also provide to Holder for Holder's review, but not for Holder's approval, a copy of the ten-year updates to the Forest Management Plan.

(b) Provisions of the Forest Management Plan - General. The Forest Management Plan must include, at a minimum, the following information:

i. identification of the natural and physical features of the Protected Property at the time of adoption and at the time of periodic updates of the Forest Management Plan, including forest types, species composition, current stocking levels, age, quality, health, and relevant stand history to the extent known; current and planned harvest areas; existing access routes; wetlands and water bodies; and locations of special plant or wildlife habitat, including significant wildlife habitats, habitat for rare, threatened, or endangered plant and wildlife species, and rare or exemplary natural communities identified in publicly available information; and other special management areas;

ii. a description of Grantor's actions to protect and manage soil productivity and water quality, including, where Commercial Forest Management Activities are undertaken, practices to be employed upon completion of harvesting operations to ensure soil stabilization as may be required to comply with Best Management Practices, or other comparable or more protective standards for soil and water protection acceptable to Grantor and approved in advance by Holder;

iii. a description of how Commercial Forest Management Activities and other permitted activities will be conducted to: (1) minimize impacts to important plant and wildlife habitats present; (2) manage known site-specific occurrences of animal and plant species that are listed by state or federal agencies as endangered, threatened, or of "special concern" for such time period as such species are so listed; and (3) meet the requirements of state and federal law regarding threatened and endangered species and include best management practices for these species as proposed during consultation with MDIFW. So long as appropriate

consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

iv. a description of the foreseeable situations in which chemical applications will be recommended, including the type, method of application, and recommended measures to protect water quality, fish and wildlife, and public safety.

v. management guidelines and restrictions for the following areas: (1) Deer Wintering Areas as mapped by the MDIFW or successor agency; and (2) vernal pools, Bat Hibernacula, Inland Wading Bird and Waterfowl Habitats, Heritage Fish Waters, and rare / exemplary natural communities, as identified by MNAP. Management guidelines and restrictions on activities within these areas should be consistent with this Conservation Easement, Best Management Practices, and MDIFW and MNAP recommendations, and with goals of improving forest health, promoting Mature Forest, and protecting plant and wildlife habitat and water quality. So long as appropriate consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

vi. a description of the Milestones and how the Protected Property will be managed to meet the Mature Forest Goal to provide for blocks of areas of habitat for species preferring Mature Forest habitat and wildlife travel corridors along riparian areas and between Mature Forest habitat; and

vii. a description and mapping of known recreational spots and trails used by the public; and

viii. a copy of this Conservation Easement as an Appendix to the Forest Management Plan.

(c) Additional Provisions of the Forest Management Plan Specific to Commercial Forest Management Activities. The Forest Management Plan must contain the following additional information:

i. a description of forest management goals and how forestry methods and actions proposed will meet the Mature Forest Goal and other requirements of Section VII.A.6, protect forest health, and are consistent with the Conservation Purposes and other terms of this Conservation Easement, taking into account the natural structure, function, and dynamics of the forest to the extent practicable given baseline forest conditions as of the date of this Conservation Easement;

ii. a recent or reasonably updated forest inventory at a density appropriate to the scale and history of the forest on the Protected Property, including current stand-typing information (forest type-size-density classes), species, size classes, and products for the Protected Property as of the date of the Forest Management Plan or Forest Management Plan update;

iii. a representation of progress made toward reaching Milestones and the Mature Forest Goal.

(d) Term of the Forest Management Plan. Grantor must submit to the Holder at least every ten years an update to the Forest Management Plan prepared for Grantor as provided in Section VII.A.6(a) above, for the Holder's review as provided in Section VII.A.6(f) below. Nothing herein shall prohibit Grantor from submitting a new or updated Forest Management Plan more frequently than every ten years provided, however, that any revised Forest Management Plan submitted during the first ten years must be approved by the Holder. The Forest Management Plan must encompass the entire portion of the Protected Property owned by Grantor and is subject to the Holder's review pursuant to Section VII.A.6.f below.

(e) Property Transfer; Forest Management Plan adopted by a subsequent owner. In the event of a transfer of title of the Protected Property, a subsequent owner must adopt a Forest Management Plan. This may be done either: (1) with notice to the Holder, by adopting the prior owner's existing Forest Management Plan for the Protected Property and if so adopted, operating consistently with that plan, or (2) by submitting a new Forest Management Plan. Upon review of such new Forest Management Plan by the Holder pursuant to Section VII.A.6(f) below, such Forest Management Plan is considered adopted by the new owner, and that owner must operate within the constraints of such Forest Management Plan and in accordance with the terms of the Easement.

(f) Holder Review. Grantor must provide to the Holder any proposed Forest Management Plan or amendments to the Forest Management Plan. Within 45 days of receipt of the amended Plan, the Holder will provide written comments to Grantor identifying and explaining any portion of the Forest Management Plan that the Holder finds to be inconsistent with the terms of this Conservation Easement and that could result in a violation of this Conservation Easement. The Holder's review will only be based on whether the Plan contains all the required plan elements and is consistent with the terms of this Conservation Easement. If the Holder does not provide comments within 45 days, the proposed or amended Forest Management Plan shall be deemed adopted. Upon adoption, the Grantor shall ensure that all forest management activities are conducted in accordance with both the adopted Forest Management Plan and the terms of this Conservation Easement. The Parties acknowledge that the purpose of the Forest Management Plan is to guide management activities so that they are in compliance with this Conservation Easement, and that, barring a Force Majeure Event, the actual outcomes resulting from management activities on the Protected Property will determine compliance with this Conservation Easement. The Holder's right to provide comments or failure to exercise that right does not constitute a waiver of the terms of this Conservation Easement.

7. Maintenance of Boundaries. It is Grantor's responsibility to, at Grantor's cost and expense, locate and keep the boundaries of the Protected Property clearly marked on the ground. Notwithstanding the foregoing, Holder has the right, but not the obligation, to

maintain the boundaries of the Protected Property so that they are readily visible and identifiable. In the event of a suspected or material infringement or encroachment on the Protected Property, Grantor is solely responsible for establishing and re-establishing the boundary through flagging or blazing, or as necessary by surveying the boundary of the Protected Property affected by the suspected or material infringement and for an appropriate distance on either side of the affected area to prevent or abate unauthorized actions of a third party in violation of this Conservation Easement.

B. SUBDIVISION

1. **Limitation on Division.** The Protected Property shall remain in its current configuration without subdivision, partition, or other division into parcels or lots that results in the transfer or conveyance by deed, lease, or contract of any portion of the Protected Property into separate ownership or control from the remainder of the Protected Property. Notwithstanding the preceding, Grantor may subdivide, convey, and re-convey the Protected Property or any portion thereof solely for the purpose of allocating distinct parcels ("Tax Parcels") as part of an intra-company transfer, if all of the following conditions are met: (1) a Tax Parcel can only be conveyed to a parent, subsidiary, affiliate, or successor of the Grantor; (2) no Tax Parcel can be subsequently conveyed to any party that is not a parent, subsidiary, affiliate, or successor of the Grantor, unless all of the Protected Property is conveyed simultaneously to that same transferee; (3) all parcels comprising the Protected Property must be managed as a single unit with a single Forest Management Plan and Annual Report, and all terms of this Conservation Easement shall apply to all parcels as if they constituted a single, unified parcel of land; (4) all notices, consents, and approvals for all parcels comprising the Protected Property shall be sent to a single contact as provided herein under Section VIII.B; (5) such Tax Parcels may be held by no more than six (6) distinct legal entities at any one time; and (6) Grantor provides Holder 30 days written notice prior to the creation or conveyance of any Tax Parcel.

2. **Boundary Line Agreements.** Grantor may enter into boundary line agreements relating to the Protected Property to resolve bona fide boundary line disputes with the prior written approval of the Holder, which shall not be unreasonably withheld, provided that the total acreage of land protected under this Conservation Easement must not be reduced by a material amount as a result of any such agreement without court order. For purposes of this section, "bona fide boundary line dispute" means a dispute, disagreement, or discrepancy regarding the location of a boundary line between the Protected Property and an abutting parcel arising from inconsistencies in deed descriptions, surveys, historic use, or irregularities in boundary markers. Any land acquired by Grantor by virtue of such boundary line agreements will become subject to this Conservation Easement, unless Holder agrees otherwise, and any land conveyed to a third party by virtue of such boundary line agreements will, upon such conveyance, be deemed released from this Conservation Easement. Land acquired or conveyed to a third party by virtue of a boundary line agreement shall be memorialized by amendment to this Conservation Easement, which amendment shall update the Exhibit A Legal Description and attach a

new Exhibit B Survey Plan, which shall be a survey showing the area affected by the boundary line agreement.

3. **Certain Exception - Conveyances to State Agencies.** The fee interest in any portion of the Protected Property may be conveyed to the State of Maine for permanent conservation ownership, subject to the terms of this Conservation Easement. Such conveyance does not constitute a division, partition, subdivision or other legal or de facto creation of lots or parcels in separate ownership under this Section VII.B.

4. **Development Rights Extinguished.** Except as provided for by the terms of this Conservation Easement, all rights to develop or use the Protected Property that are expressly prohibited by this Conservation Easement are hereby extinguished, and as a result of such extinguishment, shall not be available for transfer to any other lands pursuant to a transferable development rights scheme or cluster development arrangement or otherwise. Neither the Protected Property nor any portion thereof may be included as part of the gross area of any other property not subject to this Conservation Easement for the purposes of determining density, lot coverage, or open space requirements under an otherwise applicable statute, regulation, or ordinance controlling land use and building density.

C. STRUCTURES

Existing buildings and structures on the Protected Property, as documented in the Baseline Documentation, may be maintained, repaired, or reconfigured, provided they remain within the same footprint, are not expanded, and are in accordance with applicable land use and building laws and regulations.

Except as provided below, no additional structures or towers of any kind, temporary or permanent, may be located on the Protected Property. Structures that are permitted include:

1. **Minor Non-Forestry/Recreational Structures.** Grantor reserves the right, but not the obligation, to install, maintain, replace, and relocate on the Protected Property minor, small scale structures to enhance the opportunity for, and management of, Non-Intensive Outdoor Recreation by the public, including, but not limited to: trail markers; small unlighted informational and interpretive signs; trail improvements such as steps, bog bridges, water bars, bridges to be used for recreational purposes, boardwalks, platforms, and railings; wells and springs for fresh water supply; small boat platforms, outhauls, and docks; primitive campsite facilities, fire rings, pit toilets, picnic tables, temporary tents for camping, and tent platforms; wildlife observation stations; study markers and grids; barriers or low fences to protect fragile areas and areas under active management or study; and gates or barriers to control unauthorized use or prevent or limit access by motor vehicles, provided that if Grantor erects any such permanent barriers or gates across roads and access points Grantor must notify Holder and post signs notifying members of the public that pedestrian access is permitted at the location of each barrier or gate, or allow the Holder to post such notice. Grantor must provide Holder with a key or code to be able to access the Protected Property as provided for in Section X.A.

2. **Forestry Structures and Improvements.** Grantor reserves the right to install, maintain, replace, and relocate on the Protected Property the following improvements and structures ("Forestry Structures and Improvements") necessary or appropriate to accomplish allowed Commercial Forest Management Activities, consistent with the Forest Management Plan:

   (a) minor improvements and structures including but not limited to gates, barriers, and boundary markers;

   (b) temporary structures and improvements, including, but not limited to, temporary equipment sheds, temporary sawmills, temporary office trailers and shelters for workers, portable privies, and additional similar types of temporary structures (for purposes of this section, "temporary" means that such structures are situated in a particular location for five years or less and are not thereafter situated or erected at that same location during a period of time which is one year from the date of removal of the same), but in no case shall a temporary structure include a permanent foundation; and

   (c) Land Management Roads, Winter Haul Roads, skid trails and roads or other logging trails, and associated bridges, drainage, and support structures in accordance with the Forest Management Plan and Section VII.A.6.

3. **Remedy for Adverse Conditions.** When Forestry Structures and Improvements cease to be used, as evidenced by the cessation of their use for a period of two (2) consecutive years and lack of maintenance, and such cessation of use and lack of maintenance results in an unsafe condition, a danger to human health, or a threat to the environment (an "adverse condition"), then Grantor must either remedy such adverse conditions, or remove such improvements, which may include burning or burying any decaying structures. If so removed, the site of such structures, improvements and utilities must be revegetated with native species and stabilized, all at Grantor's cost and expense. This does not apply to roads generally but does apply to road-stream crossing infrastructure.

4. **Notice.** Before commencing site preparation, construction, or relocation of any Land Management Roads or bridges (but specifically excluding routine maintenance, repair and replacement of existing roads and bridges for which no notice and/or approval are required) Grantor must notify Holder if such planned activities have not been previously described in the Forest Management Plan or Annual Report described in Section VII.A.6. Such notice and descriptions must, at a minimum, provide sufficient information to enable the State to determine whether the proposed activities are consistent with the terms of this Conservation Easement.

D. SURFACE ALTERATIONS

As of the date of this grant, there are no surface alterations on the Protected Property except for unpaved snowmobile trails, ATV trails, foot trails, skid trails, unpaved woods roads and timber

landing areas, and culverts and similar erosion control systems, gravel pits, and alterations associated with existing structures, all of which are described in the Baseline Documentation.

No additional filling, dumping, excavation, quarrying, mining, or other alteration may be made to the surface or subsurface of the Protected Property or to its surface or ground waters, or wetlands, except that Grantor reserves the following rights:

1. **Maintenance of Existing Surface Alterations.** Grantor reserves the right to maintain existing surface alterations described above in this Section VII.D, and the right to alter the surface to the extent reasonably necessary to exercise the rights conveyed or reserved in Sections VII.C ("Structures"), VII.E ("Forest and Vegetative Management"), and Section VII.F ("Access").

2. **Establishment of Trails, Roads, Parking Areas, and Certain Facilities.** Grantor reserves the right to construct, install, maintain, and relocate Land Management Roads, including culverts, bridges, other similar drainage and support structures and erosion control devices, Winter Haul Roads, gates, skid trails and skid roads, timber landing areas, and equipment and vehicle parking areas, associated with Grantor's Reserved Rights, including to support Commercial Forest Management Activities and Non-Intensive Outdoor Recreation on the Protected Property; provided that any such roads, parking areas, and water crossings shall abide by applicable local, state, and federal laws and regulations. The establishment of any new Land Management Roads or the relocation of existing Land Management Roads requires prior written approval from Holder. Grantor reserves the further right, but not the obligation, to establish and maintain, or allow others to establish and maintain, additional unpaved footpaths and recreational trails for Non-Intensive Outdoor Recreation, with notice to Holder, and provided that they are located and designed in a manner to prevent soil erosion and prevent damage to fragile plant communities and wildlife habitat.

   Public parking areas may be permitted subject to the prior written approval of the Holder, provided they are reasonably small and scaled to meet the intended use, unpaved, and consistent with the terms of this Conservation Easement.

   All such activity by Grantor must be conducted in a manner that is consistent with the Forest Management Plan and in compliance with any applicable statutory and regulatory requirements, Best Management Practices, and the terms of this Conservation Easement.

3. **Permitted Excavation and Use of Gravel, Sand, and Rock.**

   (a) Uses: Except where otherwise specifically prohibited or restricted by this Conservation Easement, Grantor reserves the right to excavate, remove, and use gravel, sand, and rock found on the Protected Property in connection with the following permitted activities (the "Permitted Excavation Activities"):

      (i) the exercise of Grantor's Reserved Rights on the Protected Property;

(ii) the construction of and maintenance of:

(aa) Land Management Roads, timber landings, and trails on the Protected Property;

(bb) Roads or trails providing public pedestrian and vehicular access, on, over, and across the Protected Property; and

(cc) Public parking areas as described above in VII.D.2.

(iii) the commercial sale of gravel, sand, and rock to any third party.

(iv) as may be provided to the Holder by Grantor, at Grantor's option, to support the Holder's rights herein.

(b) Standards: Grantor's Permitted Excavation Activities, including any reclamation undertaken following such activities, shall be conducted in accordance with the following standards:

(i) the exposed mineral surface of any new gravel, sand, or rock pit shall be limited to not more than ten (10) acres of exposed mineral surface per site at any time with not more than an aggregate of seventy (70) acres exposed at any one time, and a total aggregate area of mined acreage in perpetuity of one hundred fifty (150) acres for all Permitted Excavation Activities. For any existing pit larger than 10 acres that is identified in the Baseline Documentation, Grantor may continue extractions without changing the footprint of the pit. Changes to the footprint of any such pit must bring the resulting pit within the 10-acre limitation, but not expand further until such portions have been restored to bring the pit within 10 acres in size.

(ii) All Excavation Activities are prohibited within 330 feet of mapped perennial streams as depicted in Exhibit D. For existing pits in riparian buffers, there shall be no expansion of such pits.

(iii) Grantor shall take measures to prevent erosion and sedimentation from the Permitted Excavation Activities into all waterbodies, which measures may include ditches, sedimentation basins, dikes, dams, or such other control devices that are effective in preventing sediments from being eroded or deposited into such water body.

(iv) All excavation activities are prohibited below an elevation that is two (2) feet above the seasonal high groundwater level.

(v) No fuel, petroleum products, salt, or chemicals may be routinely stored in any gravel pit.

(vi) No equipment may be routinely fueled in any gravel pit.

(c) Reclamation of sites. All gravel, sand, and rock pits created or re-opened after the recording of this Conservation Easement shall be reclaimed and restored with native vegetation within two (2) years after Grantor determines that such pits are exhausted. Upon reclamation, such pits will no longer count toward the 70-acre aggregate cap of exposed acres at any one time identified in SectionVII.D.3(b)(i).

4. **Excavation for Research Purposes.** Grantor reserves the right, subject to prior notice to the Holder, to permit limited excavation of the surface of the Protected Property for ecological, educational, scientific research, or cultural or archeological investigation conducted under then generally accepted professional standards that will not adversely impact the Conservation Values of the Protected Property. Excavation permitted by this Section VII.D.4 must not exceed one (1) acre in the aggregate exposed at any one time, without the prior written approval of the Holder.

E. FOREST AND VEGETATIVE MANAGEMENT

As of the date of this grant, the Protected Property remains largely undeveloped and predominantly forested. Silvicultural practices on the Protected Property must prioritize the conservation of Mature Forest habitat within a dynamic landscape that includes forests at various stages of growth, age, and composition. These practices shall, as set forth in the Forest Management Plan, ensure achievement of the Mature Forest Goal, enhance habitat connectivity, and establish permanent wildlife travel corridors along riparian areas.

Grantor reserves the right to manage vegetation on the Protected Property for commercial and non-commercial purposes in a manner that ensures achievement of the Mature Forest Goal. All such management must be in accordance with the Forest Management Plan.

1. **Vegetation Management for Commercial Forestry Purposes.** Grantor reserves the right to manage the vegetation on the Protected Property in accordance with the Forest Management Plan and as set forth below in this Section VII.E.1.

   Vegetation management on the Protected Property should encourage a full range of site adapted native species and be consistent with the Conservation Purposes of the Conservation Easement. Existing Plantations are shown on Exhibit E and described in the Forest Management Plan and may be counted as Mature Forest. New Plantations may be created up to a total aggregate of 4,000 acres total in Plantations at any one time, but such new Plantations may not count as Mature Forest. Grantor shall consult with Holder in advance of establishing new Plantations utilizing any species that are not native to the State of Maine or the Acadian forest; provided that in no event shall Grantor utilize in Plantations any non-native species identified on the list of Regulated Invasive Terrestrial Plant Species developed by the Department of Agriculture, Conservation and Forestry, as currently set out at Chapter 273 and may be later amended.

(a) Waiver in Specific Circumstances. Grantor and the Holder agree that in the event of a hurricane, fire, flood, drought, or similar event or if an insect, disease, or forest health pest outbreak occurs and sanitation or salvage harvests are necessary to prevent the outbreak from spreading to adjacent stands then the restrictions in this Section VII.E.1 may be temporarily waived with the prior written approval of the Holder.

(b) Supervision of Timber Harvesting. Timber harvesting on the Protected Property must be supervised by a professional forester licensed in the State of Maine.

(c) Grantor's Reporting Obligations.

(i) From time to time or upon request, Grantor will make best efforts to provide to the Holder copies of Forest Operations Notifications and other notifications regarding harvest locations, harvest activities, and related information (and all amendments, modifications changes, and supplements thereto) applicable to the Protected Property (the "Harvest Notifications") simultaneously with Grantor's transmittal of the same to the State of Maine, Department of Agriculture, Conservation and Forest, Bureau of Forestry (a/k/a the Maine Forest Service) or successor agency.

(ii) Grantor must provide the Holder with a written annual report that accurately describes the forestry and other activities on the Protected Property during the preceding year, including harvest locations ("Annual Report"). Grantor must also describe in the Annual Report the estimated location, silvicultural objectives, and timing of all forestry operations and other activities planned for the coming year, including planned skid trail crossings. In the report, Grantor must also demonstrate the consistency of such completed and anticipated forestry activities with the Forest Management Plan.

(iii) Grantor must provide the Holder with reasonable opportunity to meet with Grantor and its supervising licensed professional forester at least annually to review the Annual Report.

2. **Vegetation Management to support Non-Intensive Outdoor Recreation and Affirmative Rights Conveyed to the State.** Grantor has the right, but not the obligation, to manage vegetation by cutting, pruning, and planting as necessary to accommodate Non-Intensive Outdoor Recreation in accordance with the Forest Management Plan and as set forth in Section VII.F. Such vegetation management may include the minimal removal of vegetation for safety purposes and for the creation of scenic vistas and views from trails, public roadways, campsites, overlooks, and other public vantage points; provided that all such vegetation management must be conducted in a manner that does not adversely impact the Conservation Values and scenic character of the Protected Property; and further provided that no new openings or clearings in the forest greater than one-half (1/2) acre are permitted for such purposes without the prior written approval of the Holder.

3. **Incidental Operations.** Small-scale commercial or industrial operations incidental to and compatible or in connection with activities and uses expressly permitted under this Conservation Easement, such as commercial guiding, hunting bear over bait, and similar commercial recreational ventures, are allowed on the Protected Property. Subject to Holder's prior written approval, the processing and sale of products produced on the Protected Property incidental to and compatible or in connection with activities and uses permitted under this Conservation Easement are allowed on the Protected Property.

F. ACCESS

1. **Non-Motorized Public Access On and Across the Protected Property.** Grantor must permit public access on and across the Protected Property for Non-Intensive Outdoor Recreation in accordance with this section.

   Grantor agrees to take no actions to prohibit or discourage non-motorized access by the public on or over the Protected Property for Non-Intensive Outdoor Recreation, subject to reasonable rules and regulations as provided in Section VII.F.3 and the Forest Management Plan.

2. **Fees.** Neither Holder nor Grantor may charge the public fees for access to or use of the Protected Property for Non-Intensive Outdoor Recreation. Under no circumstances may Grantor retain or allow exclusive use of the Protected Property to any person or entity for recreational purposes.

3. **Rules and Regulations.** Grantor may make reasonable rules and regulations for managing or prohibiting any of the following uses for Non-Intensive Outdoor Recreation: night use; camping; noise-generating activities; open fires; use of motor vehicles; paid guides, outfitters, or services; access by domesticated animals or pets; bear baiting or hunting with dogs; any use that may interfere with or be harmful to members of the public using the Protected Property, adversely impact the Conservation Values of the Protected Property, or the proper exercise of Grantor's reserved rights. Grantor also has the right to temporarily restrict public access on limited areas of the Protected Property, and to relocate designated trails, to protect fragile areas under study, or for safety purposes during Commercial Forestry Management Activities, or during other permitted management activities that may pose a hazard to recreational users or to ensure safety, to permit necessary maintenance, or to preserve scenic, ecological, or other Conservation Values of the Protected Property. Grantor shall make best efforts to provide prompt written notice to Holder for any restrictions to public access guaranteed under this easement where such restrictions either: a) are anticipated to last for more than one season; or b) will or may significantly affect Non-Intensive Outdoor Recreation (e.g., mainline road closures, trail access) or Holder's rights of monitoring and enforcement.

4. **Recreational Use Statute.** Nothing in this Conservation Easement shall be interpreted as an assumption of responsibility by, or basis for liability on the part of, Grantor or Holder for any injury to person or damage to property or loss of life that may be sustained by any person as a result of any entry on or use of the Protected Property, nor

shall anything in this Easement be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A. Grantor and Holder specifically claim and retain all the protections, rights, defenses, and immunities provided under Maine law to owners, lessees, managers, holders of an easement, or occupants of land, including the protections contained in 14 M.R.S. § 159-A.

5. **Rights Granted and Reserved.** Nothing in this Conservation Easement shall be construed to preclude Grantor's right to grant licenses for management, or additional access on, over, or across the Protected Property for Non-Intensive Outdoor Recreation by the public, and for motorized or mechanized use by the public, subject to the prior written approval of the Holder, provided such licenses are consistent with the Conservation Purposes of this Conservation Easement and do not adversely impact the Conservation Values of the Protected Property.

   Additionally, nothing in this Conservation Easement shall prevent or limit access by Grantor or Holder across the Protected Property by motor vehicles over existing or approved forest roads for monitoring, management, or emergency purposes.

VIII. NOTICES, CONSENTS, AND APPROVALS

A. **Notices, Consents, and Approvals Provided to Holder.** Any notices, consents, or approvals provided to the Holder required by this Conservation Easement must be in writing and must be personally delivered or sent by registered or certified mail, or other courier providing reliable proof of delivery, to the following person and address, or such other person or address as may be hereafter specified:

   Director, Bureau of Parks and Lands
   22 State House Station
   Augusta, Maine 04333-0022

   With a copy to

   Office of Attorney General
   Natural Resources Division
   6 State House Station
   Augusta, ME 04333

   All other communication must be made by reasonable means under the circumstances. Notices to Holder or Holder's consent must include, at a minimum, sufficient information to enable Holder to determine whether proposed plans are consistent with the terms of this Conservation Easement.

B. **Notices, Consents and Approvals Provided to Grantor.** Any notices, consents, or approvals provided to Grantor required by this Conservation Easement must be sent by registered or certified mail, or other courier providing reliable proof of delivery, to

Grantor's designee at the following address, or to such other person or address as may be hereafter specified:

_____
_____
_____

With a copy to
_____
_____
_____

All other communication must be made by reasonable means under the circumstances. Such notices to Grantor or requests for Grantor consent, required or contemplated hereunder, must include, at a minimum, sufficient information to enable Grantor to determine whether the matter disclosed in the notice or the matter as to which consent is requested is consistent with the terms of this Conservation Easement.

C. **Other Reasonable Methods of Communication.** Notwithstanding the foregoing, as an alternative to delivery by registered or certified mail or other courier as provided above, notices, consents, and approvals may be delivered by other reasonable methods, such as email communications, as mutually agreed upon in advance, in writing, by Holder and Grantor. Documents with original signatures shall be provided upon the request of either party.

D. **Designation of Agent for Grantor in Certain Cases.** In the event that the Protected Property is owned by a trust, business entity, or any common or jointly held ownership, such grantor entity, or the common or joint owners, must designate an agent to be responsible for the granting of approvals of Grantor and the receipt of notices on behalf of Grantor. If no single owner or agent is so designated, the approval of or notice to, any executive officer of the business entity, or any one common or joint owner, is deemed the approval of or notice to all.

IX. COSTS AND LIABILITIES

A. **Payment of Taxes and Discharge of Liens by Grantor.** Grantor must pay and discharge when due all property taxes and assessments imposed upon the Protected Property and any uses thereof, and, subject to Section XII.G, avoid the imposition of any liens resulting from the actions of Grantor, its contractors and agents, which may impact Holder's rights hereunder. Subject to Section XII.G, Grantor must keep the Protected Property free of any liens or encumbrances, including without limitation those arising out of any work performed for, materials furnished to, or obligations incurred by Grantor. Holder must not incur any liens or encumbrances against the Protected Property, including, without limitation, those arising out of any work performed for, materials furnished to, or obligations incurred by Holder.

B. No Possessory Rights. Except as provided in Section VII, Grantor acknowledges that Holder has no possessory rights in the Protected Property, nor any responsibility or right to control, maintain, or keep up the Protected Property. Grantor shall retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Protected Property.

C. Limitation on Obligations of Holder. Grantor is responsible for, and Holder shall have no responsibility whatsoever for, the operation of the Property, or the monitoring of hazardous and other conditions thereon, unless expressly undertaken by separate written agreement. Notwithstanding any other provision of this Conservation Easement to the contrary, this Conservation Easement shall not be construed such that: (1) it creates in Holder the obligations or liabilities of an "owner" or "operator" as those words are defined and used in the environmental laws, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 United States Code, Sections 9601 *et seq.*) or any successor or related law; (2) it creates in Holder's obligations or liabilities of a person described in 42 United States Code Section 9607(a)(3) or any successor or related law; or (3) Holder has any control over Grantor's ability to investigate and remediate any hazardous materials associated with the Protected Property. The term "environmental laws" includes, without limitation, any federal, state, local, or administrative agency statute, regulation, rule, ordinance, order, or requirement relating to environmental conditions or hazardous substances.

X. HOLDER'S AFFIRMATIVE RIGHTS

In addition to the public access rights granted to Holder's in Section VII.F ("Access") and in Section VII.A.8 ("Maintenance of Boundaries") herein, Holder has the following additional rights:

A. Holder's Right of Entry. In a reasonable manner, Holder has the right to enter the Protected Property, including over roads owned by Grantor or rights of way or other access ways available to Grantor for access to the Protected Property, for inspection, monitoring, and enforcement purposes (see Exhibits B and C).

B. Enforcement. Holder has the right to enforce this Conservation Easement by proceedings at law and in equity, including, without limitation, the right to require the restoration of the Protected Property to a condition in compliance herewith and receive damages for irremediable harm due to violation hereof. If Holder becomes aware of a violation or threatened violation of the terms of this Conservation Easement, then Holder must give written notice to Grantor and request that Grantor take corrective action sufficient to cure the violation or prevent the threatened violation, except where emergency circumstances or prevention of a threatened breach of this Conservation Easement require more immediate enforcement action. Wherever in this Conservation Easement Grantor is afforded or retains a right to provide a plan or otherwise express an intention to take an action (regardless of whether Holder has any right to approve same), nothing in this Conservation Easement may be construed to impair Holder's right to seek

injunctive or other relief as necessary to enforce the terms of this Conservation Easement against a violation or threatened violation hereof.

If a court determines that this Conservation Easement has been or is likely to be breached, Grantor will reimburse Holder for any reasonable costs of enforcement, including court costs, reasonable attorney's fees, and any other payments ordered by such court. Nothing contained in this Conservation Easement may be construed to preclude Grantor's or Holder's rights to recover damages from any third party for trespass or other violation of their respective rights in this Conservation Easement and the Protected Property.

C. Violations by Third Parties. Holder may not bring an enforcement action against Grantor for injury to or change in the Protected Property resulting from the actions of a third party trespasser or any person who has been permitted on the Protected Property by Holder pursuant to this Easement; resulting from natural causes or environmental catastrophe beyond Grantor's control, such as insect infestation, fire, flood, storm, and earth movement; or from any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Protected Property resulting from such causes. Grantor must take all reasonable actions, consistent with customary standards for the management of comparable areas used for the same purposes as the Protected Property, to prevent or halt third parties from violating this Conservation Easement; such reasonable actions shall include informing Holder of such violations and requesting that Holder take appropriate enforcement action. Grantor and Holder, together or unilaterally, may take such action as may be reasonably necessary to remedy acts of authorized or unauthorized third parties that constitute a violation of this Conservation Easement. Furthermore, in the event of violations of this Conservation Easement caused by acts of third parties, at Holder's option, Grantor agrees to join in any suit for the purposes of pursuing enforcement action. Grantor shall remain responsible for violations of this Conservation Easement caused by acts of Grantor's employees, contractors, agents, invitees, guests, licensees, and other expressly or impliedly authorized third parties. As to violations arising from the acts or omissions of unauthorized third parties, Holder, together or unilaterally, shall have a right to enforce this Conservation Easement directly against Grantor if Grantor fails to cooperate with Holder in all reasonable respects to halt or abate the violation resulting from such acts or omissions, or fails to promptly report a known or suspected violation to Holder.

D. Signs Identifying Holder. Holder has the right, after consultation with Grantor, to install and maintain small unlighted signs visible from public vantage points, to identify the Holder and inform the public and abutting property owners that the Protected Property is under the protection of this grant.

E. Third Party Enforcement Rights. Pursuant to the Order, MDEP shall have all of the enforcement rights granted to Holder pursuant to this Section X, and shall act as a third party enforcer of this Conservation Easement.

XI. CONSERVATION EASEMENT REQUIREMENTS UNDER STATE AND FEDERAL LAWS AND REGULATIONS

A. Conservation Purposes. This Conservation Easement is established exclusively for conservation purposes consistent with the provisions of the Internal Revenue Code, as amended at Title 26, U.S.C. Section 170(h)(1-6) and Sections 2031(c), 2055, and 2522, and under Treasury Regulations at Title 26 C.F.R. §1.170A-14 *et seq.*, as amended.

B. Alternative Qualified Holder. Holder is qualified to hold conservation easements pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3).

C. Assignment Limitation. The burden of the Conservation Easement created hereby shall run with the Protected Property and is enforceable against all future owners in perpetuity. The benefits of this Conservation Easement are not appurtenant to any particular parcel of land but are in gross.

This Conservation Easement may be transferred or assigned only to a qualified holder pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3) that is willing and able to hold this Conservation Easement for the Conservation Purposes and expressly agrees to assume the responsibility imposed on by the terms of this Conservation Easement. Any such assignee or transferee has the like power of assignment or transfer; provided, however, that any such further transfer or assignment is subject to the prior written approval of the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto). If the then-current Holder of this Conservation Easement ever ceases to exist or fails to carry out the responsibility imposed on the Holder by the terms of this Conservation Easement, then the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto), in consultation with Grantor, will identify and select an appropriate entity to which this Conservation Easement may be transferred. Any assignment or transfer of responsibility for the Conservation Easement must be in a recordable form and must be recorded in the Somerset County Registry of Deeds.

D. Termination and Proceeds. This Conservation Easement may only be extinguished or terminated by judicial order in a court of competent jurisdiction. It is the intention of the parties that any extinguishment or termination be approved by a court only if all of the Conservation Purposes of this Conservation Easement are impossible to accomplish, and if Grantor, Holder, and MDEP agree.

Grantor and Holder agree that the grant of this Conservation Easement gives rise to a property right which vests immediately in Holder and which has a fair market value equal to the amount by which the fair market value of the Protected Property immediately before the imposition of this Conservation Easement is reduced by the restrictions imposed by this Conservation Easement, as of the date of the execution of this Conservation Easement (the Original Percentage Reduction).

If either Holder or Grantor receive notice of the actual or threatened exercise of the power of eminent domain (hereinafter a "Taking") with respect to any interest in or any part of the Protected Property, the party who receives the notice shall promptly notify the other and the parties may proceed jointly or either party may at its discretion take such legal action as it deems necessary to: (i) challenge the Taking; (ii) challenge the amount of allocation of any award tendered by the Taking authority; or (iii) otherwise participate in, challenge, or appeal such proceedings, findings, or awards. Any third party counsel and consultants (including appraisers) hired by either party shall be reasonably acceptable to the other party. Each party shall be responsible for its own costs and legal fees, absent written agreement of the parties.

Should this Conservation Easement be terminated or extinguished as provided in this Section XI.D, in whole or in part, Holder shall be entitled to be paid no less than a portion of any proceeds of sale, exchange, or lease computed as to the greater of (i) the Original Percentage Reduction as required under U.S. Treasury Regulations at 1.170-A-14(g)(6)(ii); or (ii) the increase in value of the Grantor's property interest resulting from such extinguishment, as determined by the court, or in the absence of such court determination, by the agreement of the parties or, in the absence of such agreement, by an independent appraiser mutually selected by Grantors and Holder. Holder shall use its share of the proceeds or other moneys received under this paragraph in a manner consistent, as nearly as possible, with the stated, publicly beneficial Conservation Purposes of this Conservation Easement.

E. <u>Amendment</u>. This instrument sets forth the entire agreement of the parties with respect to this Conservation Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Easement. Holder and Grantor, with the approval of MDEP, may amend this Conservation Easement to enhance the Conservation Values of the Protected Property or add to the restricted property, provided that no amendment shall (i) affect this Conservation Easement's perpetual duration, (ii) conflict with or be contrary to or inconsistent with the Conservation Purposes of this Conservation Easement, (iii) reduce the protection of the Conservation Values of the Protected Property, (iv) affect the qualification of this Conservation Easement as an "interest in land" or (v) affect the status of Holder as a "qualified organization." No amendment shall be effective unless the amendment complies with 33 M.R.S. § 477-A and is documented in a notarized writing executed by Holder, Grantor, and MDEP and is recorded among the land records of the County or Counties in which the Protected Property is located.

XII. GENERAL PROVISIONS

A. <u>Applicable Law</u>. This Conservation Easement is created pursuant to Maine's Conservation Easement statute 33 M.R.S. §§ 476 – 479-C, inclusive, as amended, and must be construed in accordance with the laws of the State of Maine and in accordance with the Conservation Plan.

B. Interpretation. If uncertainty should arise in the interpretation of this Conservation Easement, judgment should be made in favor of accomplishing the Conservation Purposes. Nothing in this Conservation Easement should be construed to permit any activity otherwise prohibited by law, nor to prohibit the imposition of further land use restrictions by agreement of the parties (provided that such further land use restrictions shall be consistent with the Conservation Purposes) or by operation of law.

C. Non-Waiver. The failure or delay of Holder, for any reason whatsoever, to discover a violation or initiate an action to enforce this Conservation Easement does not constitute laches, a waiver, or estoppel of its rights to do so at a later time. No act or failure to act by or on behalf of Holder, including failure to provide notice of a violation in accordance with Section X ("Holder's Affirmative Rights"), may be construed to constitute an approval, waiver, or estoppel in connection with Holder's rights to enforce the terms of this Conservation Easement.

D. Compliance. A party's obligation as Grantor, or successor owner of the Protected Property, will cease, if and when such person or entity ceases to have any present, partial, contingent, collateral, or future interest in the Protected Property, but only to the extent that the Protected Property is then in compliance with this Conservation Easement.

Responsibility of Grantor for breaches of this Conservation Easement that occur prior to transfer of title will survive such transfer; provided that the new owner shall also be responsible for bringing the Protected Property into compliance unless Holder releases the new owner. In certifying Grantor's compliance with the Forest Management Plan, the State may request, at Grantor's cost, current stand-typing information (forest type-size-density classes) and information on timber harvest levels by species group that has occurred since the date of the then-current Forest Management Plan. At Grantor's cost, Holder will provide certificates to third parties, indicating the extent to which, to Holder's knowledge, there is compliance of the Protected Property with the terms of this Conservation Easement or compliance on the part of Grantor with any obligation hereunder. Such certificate shall be delivered within thirty (30) days of Grantor's request and shall speak to the condition of the Protected Property as of the Holder's most recent inspection. If Grantor requests the certificate to be as of a more recent inspection date, the Holder shall conduct an inspection within forty-five (45) days of receipt of Grantor's written request thereof, which shall be at Grantor's cost.

E. Severability. If any provision of this Conservation Easement or the application of any provision to a particular person or circumstance is found to be invalid, the remainder of this Conservation Easement and the application of such provision to any other person or in any other circumstance remain valid.

F. Standard for Holder Granting Discretionary Consent and Providing Prior Written Approval. Grantor and Holder acknowledge that, in view of the perpetual nature of this Conservation Easement, they are unable to foresee all potential future land uses, future technologies and future evolution of the land and other natural resources, and other future occurrences affecting the Conservation Purposes. Holder may determine whether (a)

proposed uses or proposed improvements not contemplated by or addressed in this Conservation Easement or (b) alterations in existing uses or structures, are consistent with the Conservation Purposes. To make such determinations and when otherwise determining whether to provide its prior written approval when required by this Easement, the following standard applies: Holder may grant discretionary consent or provide prior written approval only if Holder has determined in its reasonable discretion that the proposed use is consistent with the Conservation Purposes, substantially conforms to the intent of this grant, meets any applicable conditions expressly stated herein, is consistent with the Conservation Plan, and does not result in a material, adverse impact on the Conservation Values of the Protected Property. Holder has no right or power to consent to any use that would result in building development on the Protected Property other than that which is expressly allowed herein, or that would be inconsistent with the Conservation Purposes or limit the term or terminate this Conservation Easement, or that would impair the qualification of this Conservation Easement or the status of Holder under any applicable laws, including 33 M.R.S. §§ 476 *et seq.*, and Section 170(h) or 501(c)(3) of the Internal Revenue Code, or successor provisions thereof.

G. Liens Subordinated. Grantor represents that as of the date of this grant there are no liens or mortgages outstanding against the Protected Property, except as listed in Exhibit A, and that such liens are subordinated to Holder's rights under this Conservation Easement. Grantor has the right to use the Protected Property as collateral to secure the repayment of debt, provided that any lien or other rights granted for such purpose are subordinate to Holder's rights under this Conservation Easement. Grantor must provide documentation of such subordination to Holder. Under no circumstances may Holder's rights be extinguished or otherwise affected by the recording, foreclosure, or any other action taken concerning any lien or other interest in the Protected Property.

H. Protections, Rights, and Immunities. Nothing in this Conservation Easement shall be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A (Maine's recreational use statute), 14 M.R.S. §§ 8101-8118 (the Maine Tort Claims Act), or any other applicable provision of law or equity. Holder specifically claims and retains all such protections, rights, and immunities.

I. Standing to Enforce. Nothing herein should be construed to grant the public standing to bring an action hereunder, nor any rights in the Protected Property by adverse possession or otherwise, provided that nothing in this Easement shall affect any existing public rights in or to the Protected Property acquired by common law, adverse possession, prescription or other law, independently of this grant. Nothing in this Section XII.I shall limit the third-party enforcement rights provided to MDEP pursuant to Section X.E.

J. Holder's Ability to Exercise Rights. The parties acknowledge that the ability of Holder to exercise the rights or carry out the duties of Holder hereunder, including, without limitation, the installation, operation, and maintenance of any recreational improvements on the Protected Property, are subject to the availability of moneys appropriated or otherwise available to Holder and designated for such purposes. Nothing in this

Conservation Easement creates any obligation on behalf of Holder in excess of such availability of moneys appropriated or otherwise available to Holder.

K. Certain Rights Preserved. Without limiting Grantor's rights to prohibit third parties from engaging in activities that may result in claims adverse to Grantor's interest in the Property, and without acknowledging the validity of such claims of third parties that may exist now or in the future, this Conservation Easement shall not impair any existing prescriptive right in the Property that may have been acquired by the public or Holder prior to the date of this Conservation Easement, or any other right the public or Holder may have to use or access the Protected Property pursuant to law.

L. Subsequent Transfers.

(a) Sale Subject to Conservation Easement. Except as specifically provided herein, nothing in this Conservation Easement shall be construed to prevent Grantor from selling or otherwise conveying or transferring the Protected Property to a third party, subject to the terms of this Conservation Easement.

(b) Incorporation of Conservation Easement Terms. Grantor must incorporate the terms of this Conservation Easement by reference in any deed or other legal instrument by which Grantor divests itself of the Protected Property. Further, Grantor must notify Holder of the transfer of the Protected Property at least thirty (30) days prior to the date of such transfer. Grantor must provide a complete copy of this Conservation Easement to any transferee of any rights in the Protected Property before any such transfer and must provide Holder with a copy of any transfer documentation upon completion of such transfer. The failure of Grantor to perform any act required by this paragraph shall not impair the validity of this Conservation Easement or limit its enforceability in any way.

Notwithstanding anything to the contrary herein, the conveyance of the Protected Property includes all appurtenant rights associated with the Protected Property, including any and all rights of access thereto. In addition, upon conveyance of all or any portion of the Protected Property, consistent with the requirements in Section VII.B.1, Grantor may reserve rights of access across the lands so conveyed or other rights and easements for the benefit of Grantor's retained lands.

[signatures on the following pages]

XIII. HABENDUM AND SIGNATURES

TO HAVE AND TO HOLD the said Conservation Easement unto the said Holder and their successors and assigns forever.

IN WITNESS WHEREOF, _____ has caused this Conservation Easement to be executed by its duly authorized representative as of this ___ day of _____, 2025.

Signed, sealed and delivered
in the presence of: _____

_____ By: _____
Name:
Its:
Hereunto duly authorized

State of Maine
County of _____, ss. _____ ____, 2025

Personally appeared the above named _____, in his capacity as the _____ of _____ and acknowledged the foregoing instrument to be his free act and deed in his said capacity, on behalf of said _____.

Before me,

_____
Notary Public/Maine Attorney-at-Law
Name: _____

XIV. ACCEPTANCE BY STATE

Pursuant to 12 M.R.S. § 1850(1) & 33 M.R.S. § 477(2), Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, hereby accepts this Conservation Easement on behalf of the STATE OF MAINE.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE, Bureau of Parks and Lands
Department of Agriculture, Conservation and Forestry

By: _____
Andrew R. Cutko
Its Director, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

Pursuant to 33 M.R.S. § 477(2) and 38 M.R.S. § _____, Melanie Loyzim, Commissioner of the Department of Environmental Protection, hereby accepts the third-party enforcement rights contained in this Conservation Easement on behalf of the Department of Environmental Protection.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered **Department of Environmental Protection**

By: _____
Melanie Loyzim
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Melanie Loyzim, Commissioner of the Department of Environmental Protection and acknowledged acceptance of the above and foregoing instrument to be her free act and deed in her said capacity, and the free act and deed of the Department of Environmental Protection.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XV. CONSENT OF COMMISSIONER

Pursuant to 12 M.R.S. § 1850(1), the Commissioner of the Department of Agriculture, Conservation and Forestry, hereby gives consent to acquisition by the STATE OF MAINE, Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, of the above and foregoing Conservation Easement.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE
Department of Agriculture, Conservation and Forestry

By: _____
Amanda E. Beal
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Amanda E. Beal, Commissioner of the Department of Agriculture, Conservation and Forestry, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XVII. ATTACHMENTS TO CONSERVATION EASEMENT

EXHIBIT A – Legal Description of the Protected Property

EXHIBIT B – Survey Plan of the Protected Property

EXHIBIT C – Map of Roads and Trails

EXHIBIT D – Map of Wetlands and Streams

EXHIBIT E – Existing Plantations located on the Protected Property

Exhibit A

Legal Description of the Protected Property

EXHIBIT A

NOTE: As used herein "recorded" shall mean recorded with the Somerset County Registry of Deeds.

BRADSTREET TOWNSHIP (T4 R7 BKP WKR)

The land situated in Bradstreet Township (T4 R7 BKP WKR), County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C. dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2489, Page 228.

EXCEPTING THEREFROM:

1. The land conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to State of Maine Department of Conservation Bureau of Parks and Lands dated September 22, 2009, and recorded in Book 4195, Page 167.

2. The land conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to The Nature Conservancy dated September 22, 2009, and recorded in Book 4195, Page 206, but EXCEPTING THEREFROM the land conveyed by deed of The Nature Conservancy to Plum Creek Maine Timberlands, L.L.C. dated June 26, 2015, and recorded in Book 4923, Page 266.

3. The "Protected Property" described in Conservation Easement from The Nature Conservancy to Forest Society of Maine dated July 22, 2011, and recorded in Book 4422, Page 245, as affected by Agreement Concerning Boundary Line between The Nature Conservancy and Plum Creek Maine Timberlands, L.L.C. dated January 30, 2012, and recorded in Book 4529, Page 265, as further affected by Amended and Restated Agreement Concerning Boundary Line between The Nature Conservancy, Plum Creek Maine Timberlands, L.L.C., and Forest Society of Maine dated January 21, 2014, and recorded in Book 4755, Page 159.

4. The land conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 211, together with all the land lying southerly of the land described in said deed.

5. To the extent not excepted by the above, all the land lying westerly and southerly of a line which is 33 feet westerly and southerly of the centerline of the southerly fork of the Mining Road, so-called.

PARLIN POND TOWNSHIP (T3 R7 BKP WKR)

The land situated in Parlin Pond Township (T3 R7 BKP WKR), County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C.

dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2490, Page 228.

EXCEPTING THEREFROM:

1. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Summerhaven Properties, Inc. dated September 6, 2001, and recorded in Book 2853, Page 101.

2. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Summerhaven Properties, Inc. and Moose Tracks, L.L.C. dated July 10, 2002, and recorded in Book 2997, Page 196.

3. The "Protected Property" described in Moosehead Region Conservation Easement granted by Plum Creek Maine Timberlands, L.L.C. to Forest Society of Maine and the State of Maine dated May 14, 2012, and recorded in Book 4523, Page 222.

4. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to the State of Maine dated March 10, 2016, and recorded in Book 5011, Page 1, and as corrected and rerecorded in Book 5012, Page 292. (Cold Stream)

5. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 224.

6. The property conveyed by deed of Weyerhaeuser Company to Anthony C. George and Catherine M. George dated May 18, 2021, and recorded in Book 5715, Page 293.

7. The property conveyed by deed of Weyerhaeuser Company to the State of Maine dated April 15, 2021, and recorded in Book 5728, Page 182.

<u>JOHNSON MOUNTAIN TOWNSHIP (T2 R6 BKP WKR)</u>

The land situated in Johnson Mountain Township (T2 R6 BKP WKR), County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C. dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2490, Page 81, as affected by Corrective and Confirmatory Quitclaim Deed Without Covenant from S.D. Warren Company to Plum Creek Maine Timberlands, L.L.C. dated July 25, 2014, and recorded in the Somerset County Registry of Deeds in Book 4814, Page 137.

ALSO EXCEPTING THEREFROM:

1. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Plum Creek Maine Marketing, Inc. dated July 1, 1999, and recorded in Book 2573, Page 191. (Marshall Yard Complex)

2. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Plum Creek Land Company dated June 23, 1999, and recorded in Book 2570, Page 142, and as corrected by Correction Deed dated June 13, 2000, and recorded in Book 2694, Page 351.

3. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Summerhaven Properties, Inc. dated September 6, 2001, and recorded in Book 2853, Page 101.

4. The "Protected Property" described in Moosehead Region Conservation Easement granted by Plum Creek Maine Timberlands, L.L.C. to Forest Society of Maine and the State of Maine dated May 14, 2012, and recorded in Book 4523, Page 222.

5. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to the State of Maine dated March 10, 2016, and recorded in Book 5011, Page 1, and as corrected and rerecorded in Book 5012, Page 292. (Cold Stream)

6. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 230.

WEST FORKS PLANTATION

The land situated in West Forks, County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C. dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2491, Page 67.

EXCEPTING THEREFROM:

1. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Plum Creek Land Company dated June 23, 1999, and recorded in Book 2570, Page 148, and as corrected by Correction Deed dated June 13, 2000, and recorded in Book 2694, Page 343, and as further corrected by Correction Deed dated October 31, 2000, and recorded in Book 2734, Page 308.

2. The land leased to Maine RSA#1, Inc. under a lease evidenced by Memorandum of Lease dated June 18, 2010, and recorded in Book 4292, Page 203, as affected by Corrective Memorandum of Lease dated January 9, 2015, and recorded in Book 4900, Page 142. (Cell Tower Site)

3. The "Protected Property" described in Moosehead Region Conservation Easement granted by Plum Creek Maine Timberlands, L.L.C. to Forest Society of Maine and the State of Maine dated May 14, 2012, and recorded in Book 4523, Page 222.

4. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to William Lyons dated March 11, 2015, and recorded in Book 4890, Page 62.

5. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to the State of Maine dated March 10, 2016, and recorded in Book 5011, Page 1, and as corrected and rerecorded in Book 5012, Page 292. (Cold Stream)

6. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 255.

7. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2019, and recorded in Book 5496, Page 134.

8. The property conveyed by deed of Weyerhaeuser Company to Richard E. Bellerose dated May 11, 2021, and recorded in Book 5714, Page 145.

Exhibit B

Survey Plan of the Protected Property

Exhibit C

Map of Roads and Trails

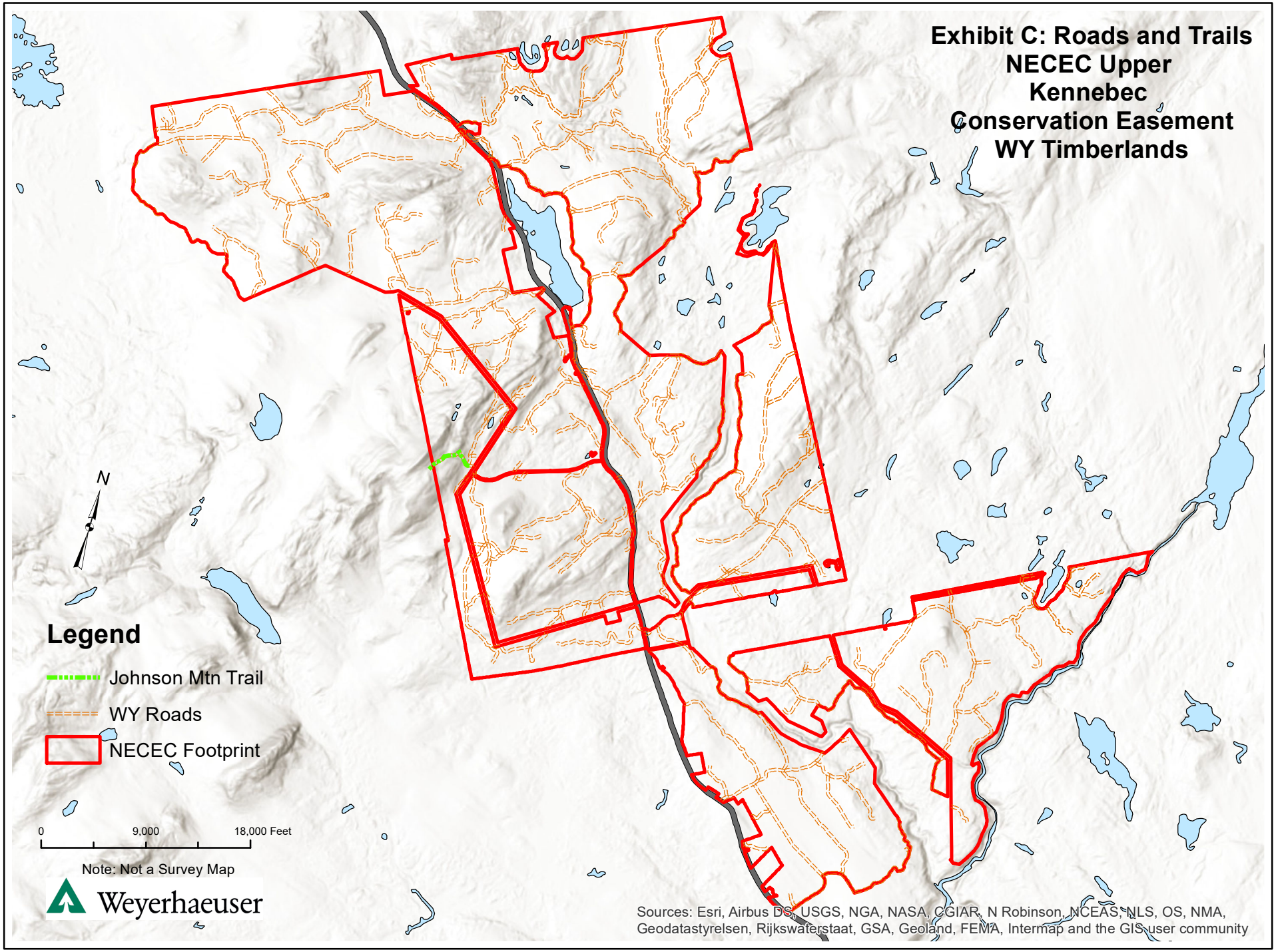
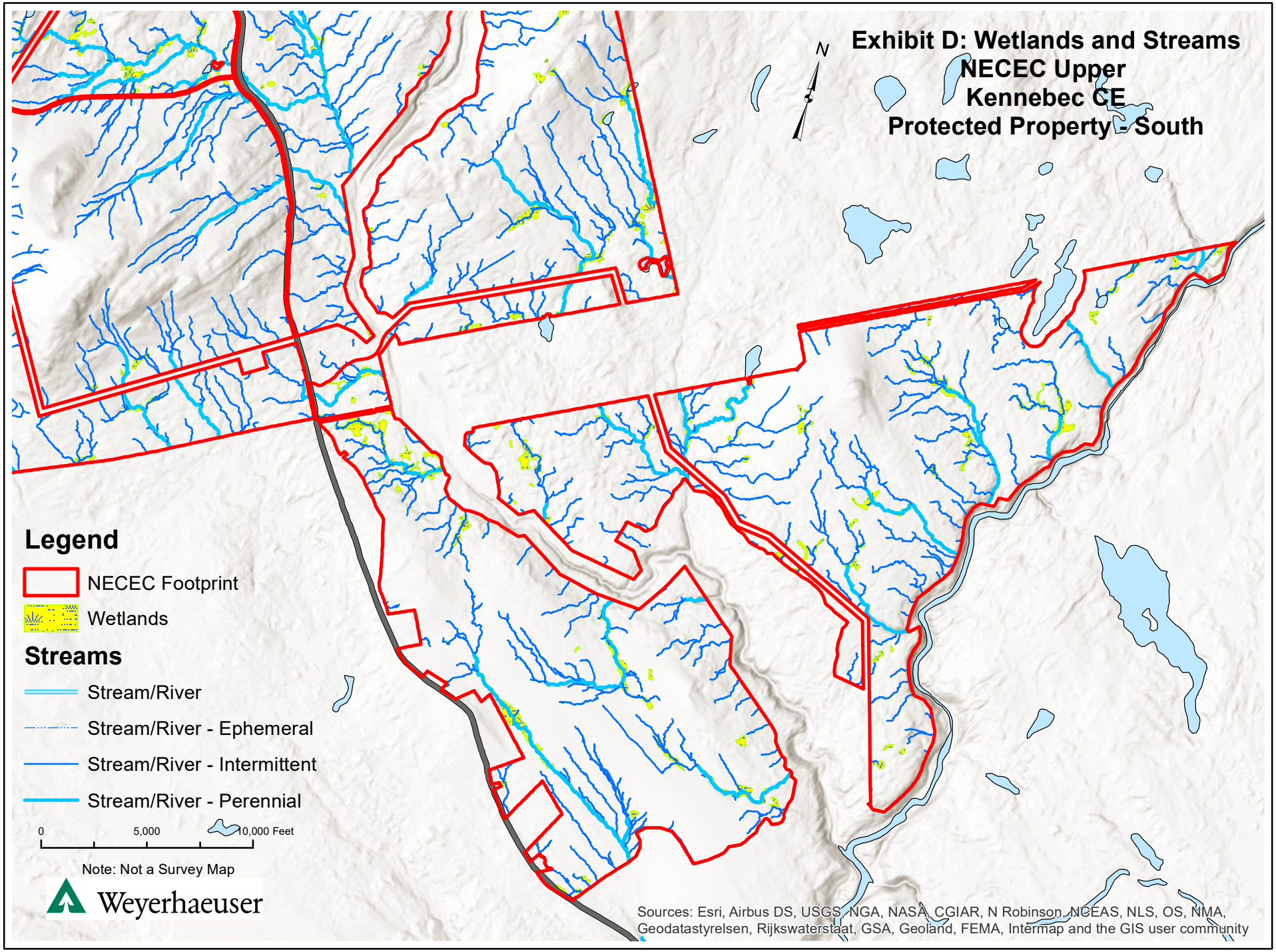

Exhibit C: Roads and Trails
NECEC Upper Kennebec Conservation Easement
WY Timberlands
N
Legend
Johnson Mtn Trail
WY Roads
NECEC Footprint
0
9,000
18,000 Feet
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Exhibit D

Map of Wetlands and Streams


Exhibit D: Wetlands and Streams
NECEC Upper
Kennebec CE
Protected Property - South
N
Legend
NECEC Footprint
Wetlands
Streams
Stream/River
Stream/River - Ephemeral
Stream/River - Intermittent
Stream/River - Perennial
0
5,000
10,000 Feet
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

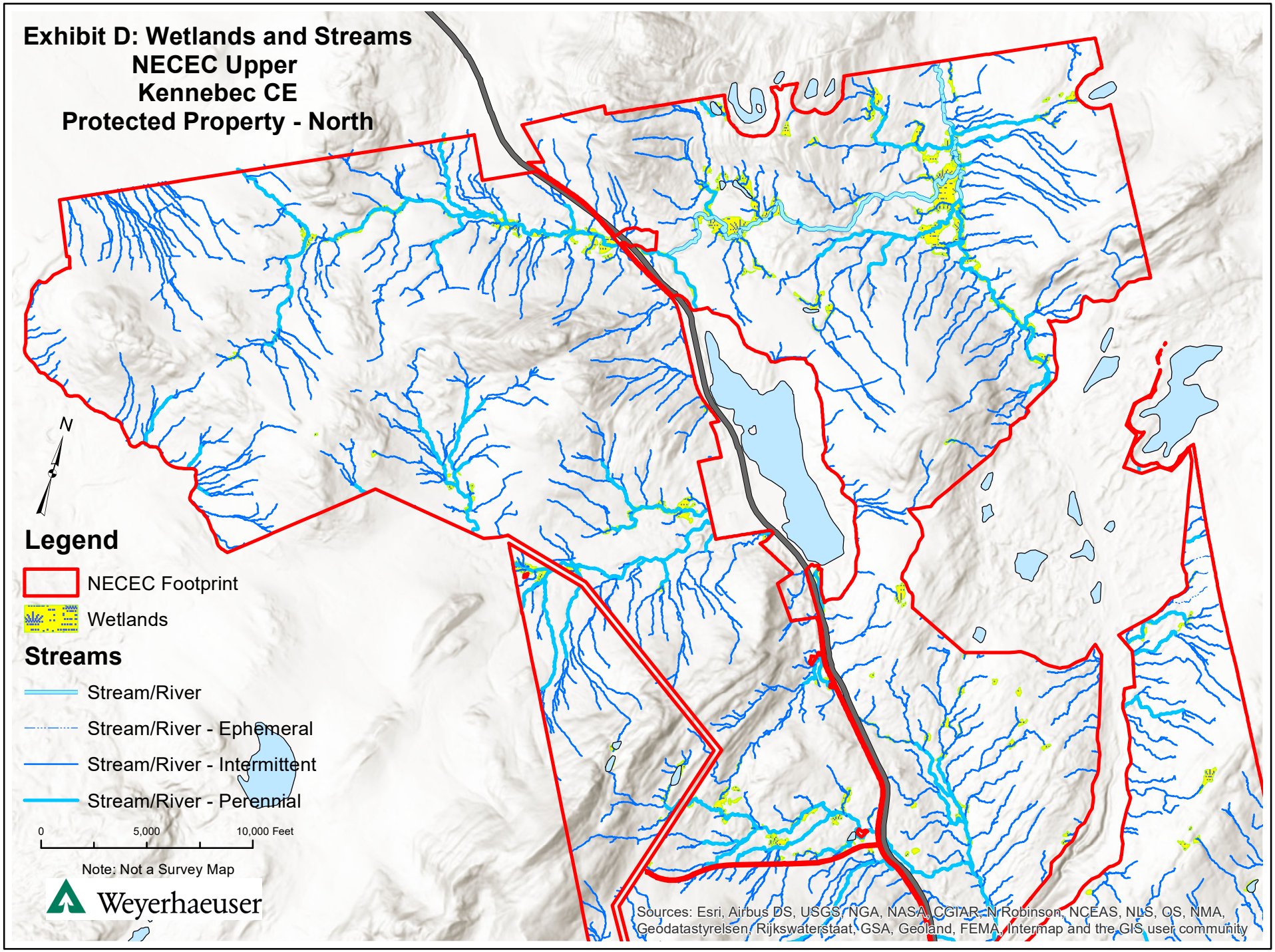
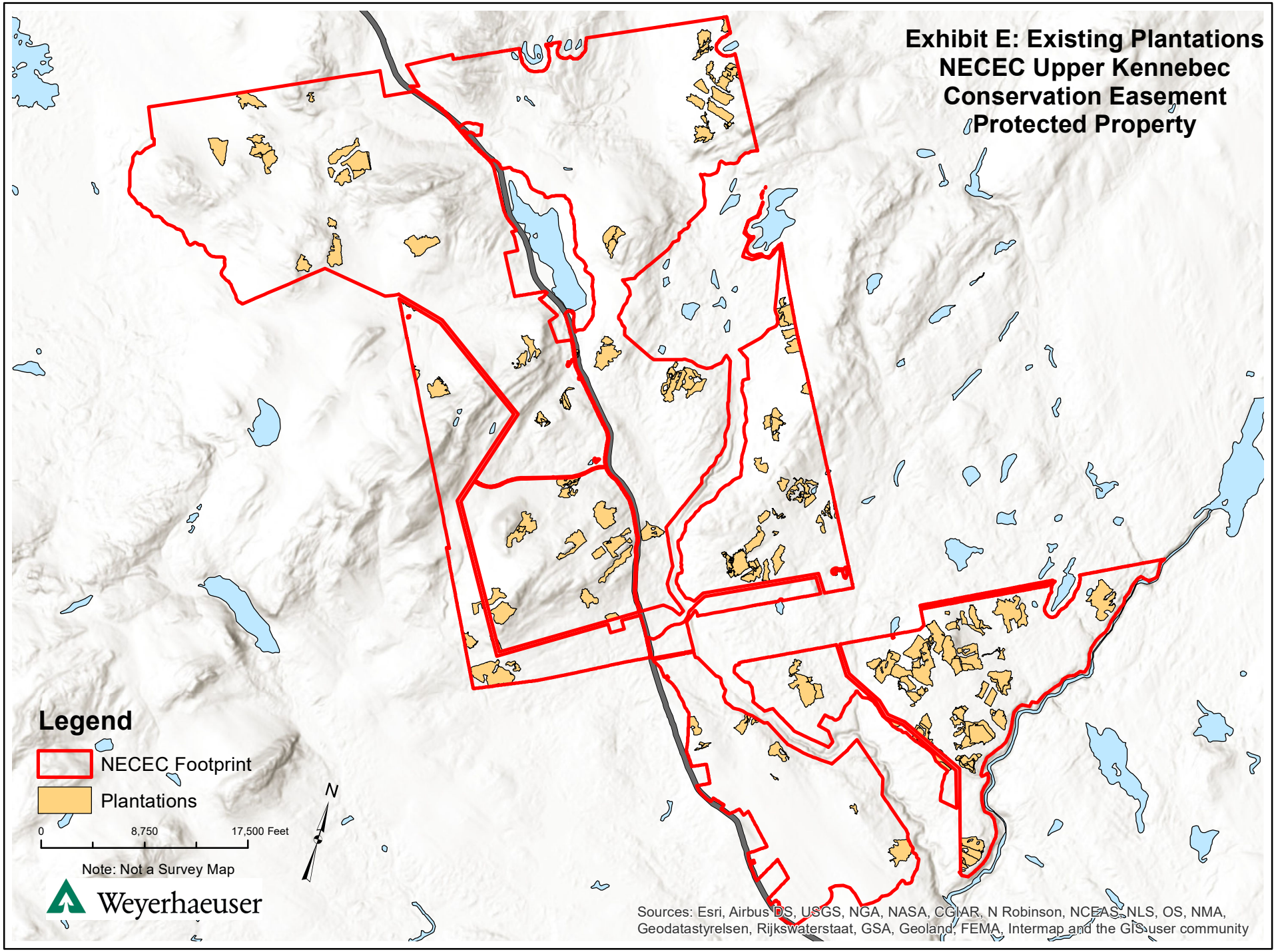

Exhibit D: Wetlands and Streams
NECEC Upper
Kennebec CE
Protected Property - North
N
Legend
NECEC Footprint
Wetlands
Streams
Stream/River
Stream/River - Ephemeral
Stream/River - Intermittent
Stream/River - Perennial
0
5,000
10,000 Feet
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Exhibit E

Existing Plantations located on the Protected Property


Exhibit E: Existing Plantations
NECEC Upper Kennebec
Conservation Easement
Protected Property
Legend
NECEC Footprint
Plantations
0
8,750
17,500 Feet
N
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

ATTACHMENT B
CONSERVATION EASEMENT
(REDLINE)

NEW ENGLAND CLEAN ENERGY CONNECT SEGMENT 1 CONSERVATION EASEMENT

I. PROJECT NAME

New England Clean Energy Connect Segment 1 Conservation Easement

II. WORDS OF CONVEYANCE

Weyerhaeuser Company, having an address of 220 Occidental Avenue South, Seattle, WA 98104, (referred to as the "Grantor", which word shall, unless the context clearly indicates otherwise, include the above-named Grantor, its successors and assigns), for consideration paid and not as a gift, HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands** (the "State," which word shall, unless the context clearly indicates otherwise, include the State's successors and assigns, or "Holder"), a governmental entity having a mailing address of 22 State House Station, Augusta, Maine 04333 with QUITCLAIM COVENANT:

A. in perpetuity, the following described conservation easement (the "Conservation Easement" or the "Easement") on, over, under, and across the real property in Bradstreet Township, Parlin Pond Township, and Johnson Mountain Township, Somerset County, Maine, more particularly described in Exhibit A, subject to those exceptions to title set forth therein (the "Protected Property"), and generally depicted on the plan attached hereto and made a part hereof as Exhibit B as set forth below. Provided that within twenty-four months of the conveyance of this Conservation Easement from Grantor to Holder, a boundary line survey shall be completed of the Protected Property that also depicts any and all of the then-existing following located on the Protected Property: rights-of-way, roads, and structures and other improvements. Said survey shall be recorded as soon as practicable after completion and, upon recording, shall be incorporated herein and act as an amendment to this Conservation Easement to replace Exhibit B;

B. non-exclusive easement for Holder's pedestrian and vehicular access to the Protected Property as necessary or appropriate to exercise Holder's rights of monitoring and enforcement of the Easement hereunder, over:

    1. any and all rights-of-way and roads owned by Grantor, as more particularly described in Exhibit A and depicted on Exhibit B; and

2. any and all rights-of-way and roads owned by third parties over which Grantor has rights of access to the Protected Property to the extent that Grantor has the right to grant the same.

C. a non-exclusive right of public pedestrian access on and across the Protected Property for purposes of Non-Intensive Outdoor Recreation.

Grantor further HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Environmental Protection**, a governmental entity having a mailing address of 17 State House Station, Augusta, Maine 04333, third party enforcement rights of the Conservation Easement as set forth in Section X.

III. DEFINITIONS

A. "Alternative Qualified Holder" is defined in Section XI.B.
B. "Baseline Documentation" is defined in Section VII.A.5.
C. "Best Management Practices" are those forest management practices set forth in the publication entitled "Best Management Practices for Forestry: Protecting Maine's Water Quality," prepared by the Maine Department of Agriculture, Conservation and Forestry, Bureau of Forestry, in such publication's current version at the time of the grant of this Conservation Easement, and as the same may be further amended, supplemented, or replaced after the date of this grant.
D. "Commercial Forest Management Activities" include Commercial Forestry and timber cruising; resource evaluation; herbicide, pesticide, and fertilizer application; timber stand improvement; pruning; mechanical timber harvesting and other forest harvesting; wood chip production; forest products transportation; natural regeneration of forest stands; prevention of fire and disease; eradication of invasive species; wildlife habitat improvement; general maintenance of forest health and biological diversity; maple sugaring; forest carbon sequestration; forest carbon credit sales (consistent with Section VII.A.4); other substantially similar and associated activities; and the construction, creation, use, and maintenance of Land Management Roads, skid trails and Winter Haul Roads, turnouts, timber landings, and crossings of flowing waters for such purposes, all as consistent with the terms of this Conservation Easement.
E. "Commercial Forestry" is defined as the planting, growing, cultivation, stocking, and harvesting of trees and other forest products to produce marketable forest products.
F. "Conservation Plan" is defined in the Maine Department of Environmental Protection ("MDEP") Findings of Fact and Order, issued May 11, 2020, and the Maine Board of Environmental Protection ("MBEP") Findings of Fact and Order, issued July 21, 2022.
G. "Conservation Values" are defined in Section V.
H. "Forestland" is defined as land stocked with trees of any size or land formerly having had such tree cover that is being managed to return to forest cover.
I. "Force Majeure Event" is defined in Section VII.A.6.
J. "Forest Management Plan" is defined in Section VII.A.6.a.
K. "Grantor" is defined as the owner in fee simple of the real property that is subject to this Conservation Easement. The term "Grantor" shall include Grantor, its successors and

assigns, and their respective authorized agents, contractors, and employees, and where specifically set forth herein, licensees, and lessees of Grantor, its successors and assigns.

L. "Land Management Road" is defined as a route or track consisting of a bed of exposed mineral soil, gravel, or other surfacing material constructed for, or created by, the repeated passage of motorized vehicles and used primarily for forest management activities (refer to Exhibit C), but such definition does not include log landings, skid trails, skid roads, and Winter Haul Roads.

M. "Mature Forest" is defined as a forest stand consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees.~~"Mature Forest" is defined as 50 foot or taller trees with a minimum basal area of 60 square feet per acre containing a mix of native species, accompanied by the presence of representative levels of well distributed standing dead and downed trees.~~

N. "Mature Forest Goal" is defined in Section VII.A.6.

O. "Milestones" is defined in Section VII.A.6.

P. "MNAP" means the Maine Natural Areas Program, which is part of the Maine Department of Agriculture, Conservation and Forestry, or any successor State program or bureau that performs similar public functions.

Q. "MDIFW" means the Maine Department of Inland Fisheries and Wildlife, or any successor State agency or bureau that performs similar functions.

R. "NECEC" is defined as the New England Clean Energy Connect Transmission Line that runs from the Canadian border in Beattie Township, Maine to the point of interconnection to the New England power grid in Lewiston, Maine.

S. "Non-Intensive Outdoor Recreation" is defined as dispersed, non-commercial, non-exclusive, non-motorized individual or small group recreational activities that do not generally rely on buildings or spectator facilities. Such uses include hunting, fishing, trapping, hiking, nature observation, picnicking, boating, cross country skiing, snow-shoeing, dog sledding, bicycling (including electric bicycles), horseback riding, swimming, primitive non-commercial camping, and outdoor education and nature study, and enjoyment of open space; provided that the incidental use of the Protected Property by the public for these purposes supported by paid guides or outfitters is not commercial or exclusive use. The establishment by Grantor of permits and collection of access fees for use of campsites and other recreational facilities permitted under this Conservation Easement is also not commercial or exclusive use.

T. "Normal high watermark of the shore" is defined as that line on the shore of water bodies which is apparent from visible markings, changes in the character of the soils due to the prolonged action of the water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial land. In places where the shore or bank is of such character that the high watermark cannot be easily determined (rockslides, ledges, rapidly eroding or slumping banks), the normal high watermark will be estimated from places where it can be determined by the above method. Distances from the normal high watermark will be determined by horizontal measurement.

U. "Permitted Excavation Activities" is defined in Section VII.D.3.

V. "Plantation" is defined as stands that are artificially regenerated via intentional planting methods.
W. "Protected Property" is defined in Section II.A.
X. "Productive Forest Acres" are defined as any area capable of growing a crop of trees that can reach Mature Forest conditions. These areas will generally have a site index of 40 or greater or, at a minimum, the ability to support trees greater than 50 feet in height.
Y. "Riparian Habitat Management Standards" are those standards for riparian areas contained in Section VII.A.6.
Z. "Segment 1" is defined as the portion of the NECEC that runs from Beattie Township, Maine to The Forks Plantation, Maine.
AA. "The Order" is defined as the MDEP Findings of Fact and Order, issued May 11, 2020, permitting construction of the NECEC, and the MBEP Findings of Fact and Order, issued July 21, 2022, affirming and amending the May 11, 2020, MDEP Findings of Fact and Order.
BB. "The Parties" is defined as Grantor, Holder, and MDEP, for third party enforcement purposes.
CC. "Wetland" means any area saturated or inundated by water at a frequency or for a duration sufficient to support, and which under normal circumstances does support, vegetation typically adapted for life in saturated soils. In most cases, this would include areas below a recognizable debris line resulting from recurring, not extreme, water action. The "upland edge" of a wetland is the boundary between the upland and wetland, and not the edge of open water. Refer to Exhibit D for a map of wetlands and streams existing at the time of recording this Easement.
DD. "Winter Haul Road" means a route or travel way that is utilized for Commercial Forest Management Activities conducted exclusively during frozen ground conditions. Winter Haul Roads must follow applicable Best Management Practices.

IV. PURPOSES

The purposes of this Conservation Easement (the "Conservation Purposes") are to conserve in perpetuity habitat in the vicinity of NECEC Segment 1 with sufficient Mature Forest acreage to mitigate and offset the effects of habitat fragmentation associated with the construction and maintenance of NECEC Segment 1, including the related edge effect; to promote habitat connectivity and conservation of Mature Forest areas; and to provide conservation compensation for the NECEC.

The Conservation Purposes of this Conservation Easement are also to ensure the forests on the Protected Property are managed to maintain a healthy, biologically diverse, productive, and Mature Forest with diverse age classes; to conserve in perpetuity the Conservation Values of the Protected Property including wildlife and ecological values; to conserve water quality, wetlands, and riparian values; and to provide guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation.

Grantor covenants that no acts or uses that are inconsistent with the Conservation Purposes shall be conducted on the Protected Property.

V. RECITALS

The following recitals (the "Recitals") more particularly describe the conservation attributes and Conservation Values of the Protected Property and the significance of this grant:

WHEREAS, Grantor is the sole owner in fee simple of 50,063 +/- acres of real property in Somerset County, as the same is described in Exhibit A, and wishes to convey a Conservation Easement over the 50,063 +/- acre Protected Property, which consists of substantially undeveloped forested land;

WHEREAS, the Protected Property is in the vicinity of Segment 1;

WHEREAS, in connection with the NECEC, the MDEP and the MBEP issued the Order;

WHEREAS, because of the impacts of the NECEC, the Order requires NECEC Transmission LLC to permanently conserve 50,000 acres of land in the vicinity of Segment 1 to, among other things, ensure the protection of wildlife;

WHEREAS, the Order requires NECEC to create and implement a Conservation Plan, as described and defined in the Order;

WHEREAS, the Conservation Plan has as its primary goal compensation for the fragmenting effect on habitat of the NECEC, and the related edge effect, by promoting habitat connectivity and conservation of Mature Forest areas;

WHEREAS, the Order allows commercial timber operations on the Protected Property provided that such operations are consistent with the conservation of Mature Forest areas;

WHEREAS, the Protected Property is desirable for conservation in furtherance of the goals of the Conservation Plan and includes the following conservation values to be conserved (collectively, the "Conservation Values"):

a. The Protected Property is a predominately forested land area of significant breadth and diversity, with outstanding values including sizeable Mature Forests, large blocks of wildlife and plant habitat, rare, threatened, and endangered species and their associated habitat, extensive bogs, wetlands, rivers, streams, lakes, remote ponds and other water bodies, and unique natural features, all of which are further quantified and delineated in the Baseline Documentation.

b. The Protected Property has ecological importance as wildlife and fisheries habitat. Conservation of the Protected Property under the terms of this Conservation Easement, by prohibiting development of the Protected Property in excess of that allowed under this Conservation Easement, will have a permanent, beneficial impact on the ecological benefits of such areas and species.

c. The Protected Property provides habitat that is suitable for diverse wildlife species of conservation interest, including mammals such as pine marten and white-tailed deer, as well as brook trout, landlocked salmon, other fish, and many species of forest interior dwelling birds, waterfowl, reptiles, and amphibians.

d. The Protected Property contains identified recreational areas important to the people of the State of Maine, and guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation in perpetuity, consistent with the preservation and protection of the other values of the Protected Property and Grantor's reserved rights, is in the public interest;

WHEREAS, subject to the terms of this Conservation Easement and an approved Forest Management Plan, the continued management of the Protected Property as a dynamic landscape at different stages of growth, ages, and composition to develop and conserve Mature Forest is compatible with the preservation and promotion of habitat connectivity, minimizes fragmentation of forest ecosystems, and provides more permanent forest and habitat resiliency;

WHEREAS, pursuant to 33 M.R.S. § 476(2)(A) and 12 M.R.S. § 1850(1), Holder may acquire and hold a conservation easement on the Protected Property, which conservation easement is a component of the Conservation Plan required by the Order;

WHEREAS, the Parties have prepared and completed the Baseline Documentation at the time of the recording of this Conservation Easement, which, in accordance with Section VII.A.5, is intended to serve as an objective, although not exclusive, information baseline for monitoring compliance with the terms of this Conservation Easement;

WHEREAS, the Parties desire to implement certain restrictions on the use of the Protected Property, impose obligations on Grantor and any future owners of the Protected Property, and grant rights to Holder, and the MDEP, with respect to the Protected Property, in perpetuity, as set forth in this Conservation Easement; and

WHEREAS, the MDEP, has approved this Conservation Easement by order dated _____.

VI. INCORPORATION OF PURPOSES AND RECITALS

NOW THEREFORE, in consideration of the foregoing Conservation Purposes and Recitals, and for the benefit of the public, the Parties have established this Conservation Easement on, over, under, and across the Protected Property consisting of the following terms, covenants, and restrictions, which shall run with and bind the Protected Property in perpetuity.

VII. RESTRICTIONS AND RESERVED RIGHTS

Except for the rights expressly conveyed by this Conservation Easement to Holder (hereinafter "Holder's Affirmative Rights"), and except for the restrictions stated in this Conservation Easement, Grantor retains all ownership rights in the Protected Property and may use the Protected Property for any lawful purpose, including, without limitation, those uses expressly reserved by Grantor herein (hereinafter "Grantor's Reserved Rights"), provided that any such use is consistent with the Conservation Purposes of this Conservation Easement. Any activities on or uses of the Protected Property that are inconsistent with the Conservation Purposes are prohibited. Without limiting the generality of the foregoing, the following restrictions and other terms are applicable to the Protected Property.

A. LAND USE

1. **Limitations on Development; Exceptions.** Residential, industrial, and commercial activities and development, quarrying, mining, mineral development, alteration of watercourses and water bodies, and building development activities are prohibited on the Protected Property, except as permitted for the authorized uses in this Conservation Easement, including but not limited to: Commercial Forest Management Activities (see Section VII.A.6), Permitted Excavation and Use of Gravel, Sand, and Rock, (see Section VII.D.3), Ecosystem Service Markets (see Section VII.A.4), Forest and Vegetation Management (see Section VII.E), Incidental Operations (see Section VII.E) and for the enhancement of Non-Intensive Outdoor Recreation as defined herein and other activities expressly permitted by this Conservation Easement or reserved by Grantor.

   Without limiting the generality of the foregoing restriction, except as currently exists as reflected in the Baseline Documentation, residential housing units, condominiums, trailer parks, mobile homes, high-intensity lighting, motels or hotels, commercial advertising, billboards, towers, antennas or equipment for telecommunications or radar, solar power or wind power structures or transmission lines, and use of the Protected Property as an aircraft landing site except in an emergency, are all specifically prohibited.

2. **Storage and Disposal of Waste; Organic Matter; Hazardous Substances Associated with Commercial Forest Management.** Discharge of wastewater into surface or ground waters on or under the Protected Property is prohibited. It is forbidden to dispose of, or store, on the Protected Property, rubbish, garbage, building debris, unserviceable vehicles and equipment or parts thereof, hazardous or other waste, hazardous or toxic substances, or other unsightly or offensive waste material. Except that organic matter and logging slash generated on the Protected Property, but not elsewhere, may be used, stored, or disposed of on the Protected Property as part of Commercial Forest Management Activities. Other waste generated by permitted uses on the Protected Property may be stored temporarily in appropriate containers for removal at reasonable intervals, all in accordance with applicable state, local, and federal law. Notwithstanding the foregoing, fuel and other hazardous or toxic substances used in the ordinary course of conducting Commercial Forest

Management Activities on the Protected Property may be stored thereon in accordance with applicable state, local, and federal laws and regulations.

3. **Limitations on Additional Easements and Other Rights.**

   (a) Access and Utility Easements. With respect to State Route 201, Holder may provide its prior written approval if such easement rights minimize adverse impacts to the Conservation Values and Holder determines that such easement rights are: (1) necessary for the Maine Department of Transportation to comply with federal or state law or (2) necessary for public safety.

   (b) Leases and Licenses. No new leases, licenses, or other interests in land that establish a right-of-way, corridor of ingress or egress, driveway, road, utility distribution or service line, or tower shall be granted, constructed, developed, or maintained into, on, over, under, or across the Protected Property without the prior written approval of the Holder. Notwithstanding the foregoing, advanced notice to Holder shall not be required for short-term and temporary licenses or leases across existing rights-of-way or land, so long as such licenses or leases do not include any land-clearing activities. For purposes of this Section VII.A.3(b), short-term and temporary means less than three years. Sugar bush leases may be granted, provided that Grantor obtains the Holder's prior written approval.

   (c) Conservation Easements. No additional conservation easements or deed restrictions shall be placed on the Protected Property without the prior written approval of the Holder.

4. **Ecosystem Service Markets.** Grantor may participate in ecosystem service market programs, including but not limited to carbon credit programs and stream, wetland, and species mitigation credit programs, that are consistent with this Conservation Easement and that do not affect Holder's right of enforcement of the Conservation Easement.

5. **Baseline Documentation.** To describe the present condition of the Protected Property and its relevant natural features, resources, and conditions, Grantor and Holder have established an inventory of the same (the "Baseline Documentation") and have certified the same as an accurate representation of the condition of the Protected Property as known to them as of the date of this grant. The Baseline Documentation is incorporated into this Conservation Easement by reference.

   Holder will prepare addenda to the Baseline Documentation from time to time to document changes to the Protected Property. Such addenda will become a part of the Baseline Documentation upon the mutual approval of Grantor and Holder. Holder will forward copies of such addenda to Grantor for Grantor's records. Holder also shall provide to MDEP, upon request, copies of the then-current Baseline Documentation with all applicable addenda.

6. **Land Uses in Accordance with a Forest Management Plan, Best Management Practices, and Applicable Laws and Regulations.**

To establish and maintain in perpetuity wildlife travel corridors along riparian areas and between Mature Forest habitat, a 100-foot no-harvest buffer must be maintained around all perennial streams and associated open wetlands as depicted in the Baseline Documentation beginning at the normal high-water line (up to no more than approximately 2,400 acres), and management must be maintained for continuous Mature Forest habitat from 100 feet to 330 feet from the normal high water line (up to no more than approximately 4,500 additional acres). Harvesting equipment crossings of these perennial streams is prohibited, except to construct road or skid trail crossings, as described in the Annual Report described in subsection VII.E.1(c)ii., to facilitate Commercial Forest Management Activities, in which case those crossings will be minimized and constructed to protect streambank integrity (all of the preceding in this paragraph being "Riparian Habitat Management Standards").

At a minimum, Commercial Forest Management Activities must result in 50% of the Productive Forest Acres as identified in the Baseline Document and Forest Management Plan of the protected property with a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees ~~with 50 foot or taller trees consisting of a mix of native species with a minimum basal area of 60 square feet per acre of live trees, accompanied by representative levels of well-distributed standing dead and downed trees~~ where present prior to management activity no later than December 31, 2065, and thereafter in perpetuity (the "Mature Forest Goal"). Progress toward the Mature Forest Goal will be made at the following rates: 13% in 2025, 20% in 2035, 30% in 2045, 40% in 2055, and 50% in 2065 (collectively, "Milestones"). Progress toward reaching the Milestones and Mature Forest Goal will be provided to Grantor in annual progress reports and, as necessary, addressed in updates to the Forest Management Plan. Holder has the right to seek verification of Grantor's measurements toward reaching the Milestones and Mature Forest Goal, provided that such verification is performed by the Maine Forest Service or another third party agreed to by Grantor. Notwithstanding the above, Grantor and the Holder agree that in the event that a hurricane, fire, flood, drought, disease, or forest health pest outbreak causes or substantially contributes to the failure of Grantor to meet the Milestones or Mature Forest Goal ("Force Majeure Event"), then Grantor shall not be found in non-compliance with this Conservation Easement. Following such an event, the Grantor and Holder shall work cooperatively to revise the Forest Management Plan in furtherance of the Conservation Values of this Conservation Easement, which may include deferring further harvests until the Mature Forest Goals are met. Any further harvesting shall require prior written approval of the Holder and give priority to restoring progress towards the Milestones and the Mature Forest Goal.

A Forest Management Plan (the "Forest Management Plan") must be developed for the Protected Property as required by the Order. All permitted land use activities on the

Protected Property must be conducted in accordance with applicable local, state, and federal laws and regulations and Best Management Practices, in a manner consistent with the Purposes and other terms of this Conservation Easement, and in conformity with the Forest Management Plan.

(a) Forest Management Plan. As of the date of this Conservation Easement, Grantor has submitted a 10-year Forest Management Plan, for Holder approval, that meets the requirements set forth in this Section VII.A.6. The Forest Management Plan has been prepared for Grantor by one or more professional foresters licensed in the State of Maine and has been approved by the Holder and MDEP as consistent with the terms of this Conservation Easement. All permitted land use activities on the Protected Property, including Commercial Forest Management Activities, must be conducted in accordance with the approved Forest Management Plan, except for preliminary resource evaluation. Updates to the Forest Management Plan must be completed every ten years and prepared by a professional forester licensed in the State of Maine and must comply with the requirements of this Conservation Easement. The Grantor must provide to Holder a copy of the Forest Management Plan. As specified in Section VII.A.6(f), Grantor must also provide to Holder for Holder's review, but not for Holder's approval, a copy of the ten-year updates to the Forest Management Plan.

(b) Provisions of the Forest Management Plan - General. The Forest Management Plan must include, at a minimum, the following information:

i. identification of the natural and physical features of the Protected Property at the time of adoption and at the time of periodic updates of the Forest Management Plan, including forest types, species composition, current stocking levels, age, quality, health, and relevant stand history to the extent known; current and planned harvest areas; existing access routes; wetlands and water bodies; and locations of special plant or wildlife habitat, including significant wildlife habitats, habitat for rare, threatened, or endangered plant and wildlife species, and rare or exemplary natural communities identified in publicly available information; and other special management areas;

ii. a description of Grantor's actions to protect and manage soil productivity and water quality, including, where Commercial Forest Management Activities are undertaken, practices to be employed upon completion of harvesting operations to ensure soil stabilization as may be required to comply with Best Management Practices, or other comparable or more protective standards for soil and water protection acceptable to Grantor and approved in advance by Holder;

iii. a description of how Commercial Forest Management Activities and other permitted activities will be conducted to: (1) minimize impacts to important plant and wildlife habitats present; (2) manage known site-specific occurrences of animal and plant species that are listed by state or federal agencies as endangered, threatened, or of "special concern" for such time period as such species are so listed; and (3) meet the requirements of state and federal law regarding threatened

and endangered species and include best management practices for these species as proposed during consultation with MDIFW. So long as appropriate consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

iv. a description of the foreseeable situations in which chemical applications will be recommended, including the type, method of application, and recommended measures to protect water quality, fish and wildlife, and public safety.

v. management guidelines and restrictions for the following areas: (1) Deer Wintering Areas as mapped by the MDIFW or successor agency; and (2) vernal pools, Bat Hibernacula, Inland Wading Bird and Waterfowl Habitats, Heritage Fish Waters, and rare / exemplary natural communities, as identified by MNAP. Management guidelines and restrictions on activities within these areas should be consistent with this Conservation Easement, Best Management Practices, and MDIFW and MNAP recommendations, and with goals of improving forest health, promoting Mature Forest, and protecting plant and wildlife habitat and water quality. So long as appropriate consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

vi. a description of the Milestones and how the Protected Property will be managed to meet the Mature Forest Goal to provide for blocks of areas of habitat for species preferring Mature Forest habitat and wildlife travel corridors along riparian areas and between Mature Forest habitat; and

vii. a description and mapping of known recreational spots and trails used by the public; and

viii. a copy of this Conservation Easement as an Appendix to the Forest Management Plan.

(c) Additional Provisions of the Forest Management Plan Specific to Commercial Forest Management Activities. The Forest Management Plan must contain the following additional information:

i. a description of forest management goals and how forestry methods and actions proposed will meet the Mature Forest Goal and other requirements of Section VII.A.6, protect forest health, and are consistent with the Conservation Purposes and other terms of this Conservation Easement, taking into account the natural structure, function, and dynamics of the forest to the extent practicable given baseline forest conditions as of the date of this Conservation Easement;

ii. a recent or reasonably updated forest inventory at a density appropriate to the scale and history of the forest on the Protected Property, including current stand-typing information (forest type-size-density classes), species, size classes, and

products for the Protected Property as of the date of the Forest Management Plan or Forest Management Plan update;

iii. a representation of progress made toward reaching Milestones and the Mature Forest Goal.

(d) Term of the Forest Management Plan. Grantor must submit to the Holder at least every ten years an update to the Forest Management Plan prepared for Grantor as provided in Section VII.A.6(a) above, for the Holder's review as provided in Section VII.A.6(f) below. Nothing herein shall prohibit Grantor from submitting a new or updated Forest Management Plan more frequently than every ten years provided, however, that any revised Forest Management Plan submitted during the first ten years must be approved by the Holder. The Forest Management Plan must encompass the entire portion of the Protected Property owned by Grantor and is subject to the Holder's review pursuant to Section VII.A.6.f below.

(e) Property Transfer; Forest Management Plan adopted by a subsequent owner. In the event of a transfer of title of the Protected Property, a subsequent owner must adopt a Forest Management Plan. This may be done either: (1) with notice to the Holder, by adopting the prior owner's existing Forest Management Plan for the Protected Property and if so adopted, operating consistently with that plan, or (2) by submitting a new Forest Management Plan. Upon review of such new Forest Management Plan by the Holder pursuant to Section VII.A.6(f) below, such Forest Management Plan is considered adopted by the new owner, and that owner must operate within the constraints of such Forest Management Plan and in accordance with the terms of the Easement.

(f) Holder Review. Grantor must provide to the Holder any proposed Forest Management Plan or amendments to the Forest Management Plan. Within 45 days of receipt of the amended Plan, the Holder will provide written comments to Grantor identifying and explaining any portion of the Forest Management Plan that the Holder finds to be inconsistent with the terms of this Conservation Easement and that could result in a violation of this Conservation Easement. The Holder's review will only be based on whether the Plan contains all the required plan elements and is consistent with the terms of this Conservation Easement. If the Holder does not provide comments within 45 days, the proposed or amended Forest Management Plan shall be deemed adopted. Upon adoption, the Grantor shall ensure that all forest management activities are conducted in accordance with both the adopted Forest Management Plan and the terms of this Conservation Easement. The Parties acknowledge that the purpose of the Forest Management Plan is to guide management activities so that they are in compliance with this Conservation Easement, and that, barring a Force Majeure Event, the actual outcomes resulting from management activities on the Protected Property will determine compliance with this Conservation Easement. The Holder's right to provide comments or failure to exercise that right does not constitute a waiver of the terms of this Conservation Easement.

7. **Maintenance of Boundaries.** It is Grantor's responsibility to, at Grantor's cost and expense, locate and keep the boundaries of the Protected Property clearly marked on the ground. Notwithstanding the foregoing, Holder has the right, but not the obligation, to maintain the boundaries of the Protected Property so that they are readily visible and identifiable. In the event of a suspected or material infringement or encroachment on the Protected Property, Grantor is solely responsible for establishing and re-establishing the boundary through flagging or blazing, or as necessary by surveying the boundary of the Protected Property affected by the suspected or material infringement and for an appropriate distance on either side of the affected area to prevent or abate unauthorized actions of a third party in violation of this Conservation Easement.

B. SUBDIVISION

1. **Limitation on Division.** The Protected Property shall remain in its current configuration without subdivision, partition, or other division into parcels or lots that results in the transfer or conveyance by deed, lease, or contract of any portion of the Protected Property into separate ownership or control from the remainder of the Protected Property. Notwithstanding the preceding, Grantor may subdivide, convey, and re-convey the Protected Property or any portion thereof solely for the purpose of allocating distinct parcels ("Tax Parcels") as part of an intra-company transfer, if all of the following conditions are met: (1) a Tax Parcel can only be conveyed to a parent, subsidiary, affiliate, or successor of the Grantor; (2) no Tax Parcel can be subsequently conveyed to any party that is not a parent, subsidiary, affiliate, or successor of the Grantor, unless all of the Protected Property is conveyed simultaneously to that same transferee; (3) all parcels comprising the Protected Property must be managed as a single unit with a single Forest Management Plan and Annual Report, and all terms of this Conservation Easement shall apply to all parcels as if they constituted a single, unified parcel of land; (4) all notices, consents, and approvals for all parcels comprising the Protected Property shall be sent to a single contact as provided herein under Section VIII.B; (5) such Tax Parcels may be held by no more than six (6) distinct legal entities at any one time; and (6) Grantor provides Holder 30 days written notice prior to the creation or conveyance of any Tax Parcel.

2. **Boundary Line Agreements.** Grantor may enter into boundary line agreements relating to the Protected Property to resolve bona fide boundary line disputes with the prior written approval of the Holder, which shall not be unreasonably withheld, provided that the total acreage of land protected under this Conservation Easement must not be reduced by a material amount as a result of any such agreement without court order. For purposes of this section, "bona fide boundary line dispute" means a dispute, disagreement, or discrepancy regarding the location of a boundary line between the Protected Property and an abutting parcel arising from inconsistencies in deed descriptions, surveys, historic use, or irregularities in boundary markers. Any land acquired by Grantor by virtue of such boundary line agreements will become subject to this Conservation Easement, unless Holder agrees otherwise, and any land conveyed to a third party by virtue of such boundary line agreements will, upon such conveyance, be deemed released from this Conservation Easement. Land acquired or conveyed to a third party by virtue of a

boundary line agreement shall be memorialized by amendment to this Conservation Easement, which amendment shall update the Exhibit A Legal Description and attach a new Exhibit B Survey Plan, which shall be a survey showing the area affected by the boundary line agreement.

3. **Certain Exception - Conveyances to State Agencies.** The fee interest in any portion of the Protected Property may be conveyed to the State of Maine for permanent conservation ownership, subject to the terms of this Conservation Easement. Such conveyance does not constitute a division, partition, subdivision or other legal or de facto creation of lots or parcels in separate ownership under this Section VII.B.

4. **Development Rights Extinguished.** Except as provided for by the terms of this Conservation Easement, all rights to develop or use the Protected Property that are expressly prohibited by this Conservation Easement are hereby extinguished, and as a result of such extinguishment, shall not be available for transfer to any other lands pursuant to a transferable development rights scheme or cluster development arrangement or otherwise. Neither the Protected Property nor any portion thereof may be included as part of the gross area of any other property not subject to this Conservation Easement for the purposes of determining density, lot coverage, or open space requirements under an otherwise applicable statute, regulation, or ordinance controlling land use and building density.

C. STRUCTURES

Existing buildings and structures on the Protected Property, as documented in the Baseline Documentation, may be maintained, repaired, or reconfigured, provided they remain within the same footprint, are not expanded, and are in accordance with applicable land use and building laws and regulations.

Except as provided below, no additional structures or towers of any kind, temporary or permanent, may be located on the Protected Property. Structures that are permitted include:

1. **Minor Non-Forestry/Recreational Structures.** Grantor reserves the right, but not the obligation, to install, maintain, replace, and relocate on the Protected Property minor, small scale structures to enhance the opportunity for, and management of, Non-Intensive Outdoor Recreation by the public, including, but not limited to: trail markers; small unlighted informational and interpretive signs; trail improvements such as steps, bog bridges, water bars, bridges to be used for recreational purposes, boardwalks, platforms, and railings; wells and springs for fresh water supply; small boat platforms, outhauls, and docks; primitive campsite facilities, fire rings, pit toilets, picnic tables, temporary tents for camping, and tent platforms; wildlife observation stations; study markers and grids; barriers or low fences to protect fragile areas and areas under active management or study; and gates or barriers to control unauthorized use or prevent or limit access by motor vehicles, provided that if Grantor erects any such permanent barriers or gates across roads and access points Grantor must notify Holder and post signs notifying members of the public that pedestrian access is permitted at the location of each barrier or gate, or allow the

Holder to post such notice. Grantor must provide Holder with a key or code to be able to access the Protected Property as provided for in Section X.A.

2. **Forestry Structures and Improvements.** Grantor reserves the right to install, maintain, replace, and relocate on the Protected Property the following improvements and structures ("Forestry Structures and Improvements") necessary or appropriate to accomplish allowed Commercial Forest Management Activities, consistent with the Forest Management Plan:

   (a) minor improvements and structures including but not limited to gates, barriers, and boundary markers;

   (b) temporary structures and improvements, including, but not limited to, temporary equipment sheds, temporary sawmills, temporary office trailers and shelters for workers, portable privies, and additional similar types of temporary structures (for purposes of this section, "temporary" means that such structures are situated in a particular location for five years or less and are not thereafter situated or erected at that same location during a period of time which is one year from the date of removal of the same), but in no case shall a temporary structure include a permanent foundation; and

   (c) Land Management Roads, Winter Haul Roads, skid trails and roads or other logging trails, and associated bridges, drainage, and support structures in accordance with the Forest Management Plan and Section VII.A.6.

3. **Remedy for Adverse Conditions.** When Forestry Structures and Improvements cease to be used, as evidenced by the cessation of their use for a period of two (2) consecutive years and lack of maintenance, and such cessation of use and lack of maintenance results in an unsafe condition, a danger to human health, or a threat to the environment (an "adverse condition"), then Grantor must either remedy such adverse conditions, or remove such improvements, which may include burning or burying any decaying structures. If so removed, the site of such structures, improvements and utilities must be revegetated with native species and stabilized, all at Grantor's cost and expense. This does not apply to roads generally but does apply to road-stream crossing infrastructure.

4. **Notice.** Before commencing site preparation, construction, or relocation of any Land Management Roads or bridges (but specifically excluding routine maintenance, repair and replacement of existing roads and bridges for which no notice and/or approval are required) Grantor must notify Holder if such planned activities have not been previously described in the Forest Management Plan or Annual Report described in Section VII.A.6. Such notice and descriptions must, at a minimum, provide sufficient information to enable the State to determine whether the proposed activities are consistent with the terms of this Conservation Easement.

D. SURFACE ALTERATIONS

As of the date of this grant, there are no surface alterations on the Protected Property except for unpaved snowmobile trails, ATV trails, foot trails, skid trails, unpaved woods roads and timber landing areas, and culverts and similar erosion control systems, gravel pits, and alterations associated with existing structures, all of which are described in the Baseline Documentation.

No additional filling, dumping, excavation, quarrying, mining, or other alteration may be made to the surface or subsurface of the Protected Property or to its surface or ground waters, or wetlands, except that Grantor reserves the following rights:

1. **Maintenance of Existing Surface Alterations.** Grantor reserves the right to maintain existing surface alterations described above in this Section VII.D, and the right to alter the surface to the extent reasonably necessary to exercise the rights conveyed or reserved in Sections VII.C ("Structures"), VII.E ("Forest and Vegetative Management"), and Section VII.F ("Access").

2. **Establishment of Trails, Roads, Parking Areas, and Certain Facilities.** Grantor reserves the right to construct, install, maintain, and relocate Land Management Roads, including culverts, bridges, other similar drainage and support structures and erosion control devices, Winter Haul Roads, gates, skid trails and skid roads, timber landing areas, and equipment and vehicle parking areas, associated with Grantor's Reserved Rights, including to support Commercial Forest Management Activities and Non-Intensive Outdoor Recreation on the Protected Property; provided that any such roads, parking areas, and water crossings shall abide by applicable local, state, and federal laws and regulations. The establishment of any new Land Management Roads or the relocation of existing Land Management Roads requires prior written approval from Holder. Grantor reserves the further right, but not the obligation, to establish and maintain, or allow others to establish and maintain, additional unpaved footpaths and recreational trails for Non-Intensive Outdoor Recreation, with notice to Holder, and provided that they are located and designed in a manner to prevent soil erosion and prevent damage to fragile plant communities and wildlife habitat.

   Public parking areas may be permitted subject to the prior written approval of the Holder, provided they are reasonably small and scaled to meet the intended use, unpaved, and consistent with the terms of this Conservation Easement.

   All such activity by Grantor must be conducted in a manner that is consistent with the Forest Management Plan and in compliance with any applicable statutory and regulatory requirements, Best Management Practices, and the terms of this Conservation Easement.

3. **Permitted Excavation and Use of Gravel, Sand, and Rock.**

   (a) Uses: Except where otherwise specifically prohibited or restricted by this Conservation Easement, Grantor reserves the right to excavate, remove, and use gravel, sand, and

rock found on the Protected Property in connection with the following permitted activities (the "Permitted Excavation Activities"):

(i) the exercise of Grantor's Reserved Rights on the Protected Property;

(ii) the construction of and maintenance of:

(aa) Land Management Roads, timber landings, and trails on the Protected Property;

(bb) Roads or trails providing public pedestrian and vehicular access, on, over, and across the Protected Property; and

(cc) Public parking areas as described above in VII.D.2.

(iii) the commercial sale of gravel, sand, and rock to any third party.

(iv) as may be provided to the Holder by Grantor, at Grantor's option, to support the Holder's rights herein.

(b) Standards: Grantor's Permitted Excavation Activities, including any reclamation undertaken following such activities, shall be conducted in accordance with the following standards:

(i) the exposed mineral surface of any new gravel, sand, or rock pit shall be limited to not more than ten (10) acres of exposed mineral surface per site at any time with not more than an aggregate of seventy (70) acres exposed at any one time, and a total aggregate area of mined acreage in perpetuity of one hundred fifty (150) acres for all Permitted Excavation Activities. For any existing pit larger than 10 acres that is identified in the Baseline Documentation, Grantor may continue extractions without changing the footprint of the pit. Changes to the footprint of any such pit must bring the resulting pit within the 10-acre limitation, but not expand further until such portions have been restored to bring the pit within 10 acres in size.

(ii) All Excavation Activities are prohibited within 330 feet of mapped perennial streams as depicted in Exhibit D. For existing pits in riparian buffers, there shall be no expansion of such pits.

(iii) Grantor shall take measures to prevent erosion and sedimentation from the Permitted Excavation Activities into all waterbodies, which measures may include ditches, sedimentation basins, dikes, dams, or such other control devices that are effective in preventing sediments from being eroded or deposited into such water body.

(iv) All excavation activities are prohibited below an elevation that is two (2) feet above the seasonal high groundwater level.

(v) No fuel, petroleum products, salt, or chemicals may be routinely stored in any gravel pit.

(vi) No equipment may be routinely fueled in any gravel pit.

(c) Reclamation of sites. All gravel, sand, and rock pits created or re-opened after the recording of this Conservation Easement shall be reclaimed and restored with native vegetation within two (2) years after Grantor determines that such pits are exhausted. Upon reclamation, such pits will no longer count toward the 70-acre aggregate cap of exposed acres at any one time identified in SectionVII.D.3(b)(i).

4. **Excavation for Research Purposes.** Grantor reserves the right, subject to prior notice to the Holder, to permit limited excavation of the surface of the Protected Property for ecological, educational, scientific research, or cultural or archeological investigation conducted under then generally accepted professional standards that will not adversely impact the Conservation Values of the Protected Property. Excavation permitted by this Section VII.D.4 must not exceed one (1) acre in the aggregate exposed at any one time, without the prior written approval of the Holder.

E. FOREST AND VEGETATIVE MANAGEMENT

As of the date of this grant, the Protected Property remains largely undeveloped and predominantly forested. Silvicultural practices on the Protected Property must prioritize the conservation of Mature Forest habitat within a dynamic landscape that includes forests at various stages of growth, age, and composition. These practices shall, as set forth in the Forest Management Plan, ensure achievement of the Mature Forest Goal, enhance habitat connectivity, and establish permanent wildlife travel corridors along riparian areas.

Grantor reserves the right to manage vegetation on the Protected Property for commercial and non-commercial purposes in a manner that ensures achievement of the Mature Forest Goal. All such management must be in accordance with the Forest Management Plan.

1. **Vegetation Management for Commercial Forestry Purposes.** Grantor reserves the right to manage the vegetation on the Protected Property in accordance with the Forest Management Plan and as set forth below in this Section VII.E.1.

   Vegetation management on the Protected Property should encourage a full range of site adapted native species and be consistent with the Conservation Purposes of the Conservation Easement. Existing Plantations are shown on Exhibit E and described in the Forest Management Plan and may be counted as Mature Forest. New Plantations may be created up to a total aggregate of 4,000 acres total in Plantations at any one time, but such new Plantations may not count as Mature Forest. Grantor shall consult with Holder in advance of establishing new Plantations utilizing any species that are not native

to the State of Maine or the Acadian forest; provided that in no event shall Grantor utilize in Plantations any non-native species identified on the list of Regulated Invasive Terrestrial Plant Species developed by the Department of Agriculture, Conservation and Forestry, as currently set out at Chapter 273 and may be later amended.

(a) Waiver in Specific Circumstances. Grantor and the Holder agree that in the event of a hurricane, fire, flood, drought, or similar event or if an insect, disease, or forest health pest outbreak occurs and sanitation or salvage harvests are necessary to prevent the outbreak from spreading to adjacent stands then the restrictions in this Section VII.E.1 may be temporarily waived with the prior written approval of the Holder.

(b) Supervision of Timber Harvesting. Timber harvesting on the Protected Property must be supervised by a professional forester licensed in the State of Maine.

(c) Grantor's Reporting Obligations.

(i) From time to time or upon request, Grantor will make best efforts to provide to the Holder copies of Forest Operations Notifications and other notifications regarding harvest locations, harvest activities, and related information (and all amendments, modifications changes, and supplements thereto) applicable to the Protected Property (the "Harvest Notifications") simultaneously with Grantor's transmittal of the same to the State of Maine, Department of Agriculture, Conservation and Forest, Bureau of Forestry (a/k/a the Maine Forest Service) or successor agency.

(ii) Grantor must provide the Holder with a written annual report that accurately describes the forestry and other activities on the Protected Property during the preceding year, including harvest locations ("Annual Report"). Grantor must also describe in the Annual Report the estimated location, silvicultural objectives, and timing of all forestry operations and other activities planned for the coming year, including planned skid trail crossings. In the report, Grantor must also demonstrate the consistency of such completed and anticipated forestry activities with the Forest Management Plan.

(iii) Grantor must provide the Holder with reasonable opportunity to meet with Grantor and its supervising licensed professional forester at least annually to review the Annual Report.

2. **Vegetation Management to support Non-Intensive Outdoor Recreation and Affirmative Rights Conveyed to the State.** Grantor has the right, but not the obligation, to manage vegetation by cutting, pruning, and planting as necessary to accommodate Non-Intensive Outdoor Recreation in accordance with the Forest Management Plan and as set forth in Section VII.F. Such vegetation management may include the minimal removal of vegetation for safety purposes and for the creation of scenic vistas and views from trails, public roadways, campsites, overlooks, and other public vantage points; provided that all such vegetation management must be conducted in a manner that does not adversely

impact the Conservation Values and scenic character of the Protected Property; and further provided that no new openings or clearings in the forest greater than one-half (1/2) acre are permitted for such purposes without the prior written approval of the Holder.

3. **Incidental Operations.** Small-scale commercial or industrial operations incidental to and compatible or in connection with activities and uses expressly permitted under this Conservation Easement, such as commercial guiding, hunting bear over bait, and similar commercial recreational ventures, are allowed on the Protected Property. Subject to Holder's prior written approval, the processing and sale of products produced on the Protected Property incidental to and compatible or in connection with activities and uses permitted under this Conservation Easement are allowed on the Protected Property.

F. ACCESS

1. **Non-Motorized Public Access On and Across the Protected Property.** Grantor must permit public access on and across the Protected Property for Non-Intensive Outdoor Recreation in accordance with this section.

   Grantor agrees to take no actions to prohibit or discourage non-motorized access by the public on or over the Protected Property for Non-Intensive Outdoor Recreation, subject to reasonable rules and regulations as provided in Section VII.F.3 and the Forest Management Plan.

2. **Fees.** Neither Holder nor Grantor may charge the public fees for access to or use of the Protected Property for Non-Intensive Outdoor Recreation. Under no circumstances may Grantor retain or allow exclusive use of the Protected Property to any person or entity for recreational purposes.

3. **Rules and Regulations.** Grantor may make reasonable rules and regulations for managing or prohibiting any of the following uses for Non-Intensive Outdoor Recreation: night use; camping; noise-generating activities; open fires; use of motor vehicles; paid guides, outfitters, or services; access by domesticated animals or pets; bear baiting or hunting with dogs; any use that may interfere with or be harmful to members of the public using the Protected Property, adversely impact the Conservation Values of the Protected Property, or the proper exercise of Grantor's reserved rights. Grantor also has the right to temporarily restrict public access on limited areas of the Protected Property, and to relocate designated trails, to protect fragile areas under study, or for safety purposes during Commercial Forestry Management Activities, or during other permitted management activities that may pose a hazard to recreational users or to ensure safety, to permit necessary maintenance, or to preserve scenic, ecological, or other Conservation Values of the Protected Property. Grantor shall make best efforts to provide prompt written notice to Holder for any restrictions to public access guaranteed under this easement where such restrictions either: a) are anticipated to last for more than one season; or b) will or may significantly affect Non-Intensive Outdoor Recreation (e.g., mainline road closures, trail access) or Holder's rights of monitoring and enforcement.

4. **Recreational Use Statute.** Nothing in this Conservation Easement shall be interpreted as an assumption of responsibility by, or basis for liability on the part of, Grantor or Holder for any injury to person or damage to property or loss of life that may be sustained by any person as a result of any entry on or use of the Protected Property, nor shall anything in this Easement be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A. Grantor and Holder specifically claim and retain all the protections, rights, defenses, and immunities provided under Maine law to owners, lessees, managers, holders of an easement, or occupants of land, including the protections contained in 14 M.R.S. § 159-A.

5. **Rights Granted and Reserved.** Nothing in this Conservation Easement shall be construed to preclude Grantor's right to grant licenses for management, or additional access on, over, or across the Protected Property for Non-Intensive Outdoor Recreation by the public, and for motorized or mechanized use by the public, subject to the prior written approval of the Holder, provided such licenses are consistent with the Conservation Purposes of this Conservation Easement and do not adversely impact the Conservation Values of the Protected Property.

   Additionally, nothing in this Conservation Easement shall prevent or limit access by Grantor or Holder across the Protected Property by motor vehicles over existing or approved forest roads for monitoring, management, or emergency purposes.

VIII. NOTICES, CONSENTS, AND APPROVALS

A. **Notices, Consents, and Approvals Provided to Holder.** Any notices, consents, or approvals provided to the Holder required by this Conservation Easement must be in writing and must be personally delivered or sent by registered or certified mail, or other courier providing reliable proof of delivery, to the following person and address, or such other person or address as may be hereafter specified:

   Director, Bureau of Parks and Lands
   22 State House Station
   Augusta, Maine 04333-0022

   With a copy to

   Office of Attorney General
   Natural Resources Division
   6 State House Station
   Augusta, ME 04333

   All other communication must be made by reasonable means under the circumstances. Notices to Holder or Holder's consent must include, at a minimum, sufficient information to enable Holder to determine whether proposed plans are consistent with the terms of this Conservation Easement.

B. Notices, Consents and Approvals Provided to Grantor. Any notices, consents, or approvals provided to Grantor required by this Conservation Easement must be sent by registered or certified mail, or other courier providing reliable proof of delivery, to Grantor's designee at the following address, or to such other person or address as may be hereafter specified:

With a copy to

All other communication must be made by reasonable means under the circumstances. Such notices to Grantor or requests for Grantor consent, required or contemplated hereunder, must include, at a minimum, sufficient information to enable Grantor to determine whether the matter disclosed in the notice or the matter as to which consent is requested is consistent with the terms of this Conservation Easement.

C. Other Reasonable Methods of Communication. Notwithstanding the foregoing, as an alternative to delivery by registered or certified mail or other courier as provided above, notices, consents, and approvals may be delivered by other reasonable methods, such as email communications, as mutually agreed upon in advance, in writing, by Holder and Grantor. Documents with original signatures shall be provided upon the request of either party.

D. Designation of Agent for Grantor in Certain Cases. In the event that the Protected Property is owned by a trust, business entity, or any common or jointly held ownership, such grantor entity, or the common or joint owners, must designate an agent to be responsible for the granting of approvals of Grantor and the receipt of notices on behalf of Grantor. If no single owner or agent is so designated, the approval of or notice to, any executive officer of the business entity, or any one common or joint owner, is deemed the approval of or notice to all.

IX. COSTS AND LIABILITIES

A. Payment of Taxes and Discharge of Liens by Grantor. Grantor must pay and discharge when due all property taxes and assessments imposed upon the Protected Property and any uses thereof, and, subject to Section XII.G, avoid the imposition of any liens resulting from the actions of Grantor, its contractors and agents, which may impact Holder's rights hereunder. Subject to Section XII.G, Grantor must keep the Protected Property free of any liens or encumbrances, including without limitation those arising out of any work performed for, materials furnished to, or obligations incurred by Grantor. Holder must not incur any liens or encumbrances against the Protected Property,

including, without limitation, those arising out of any work performed for, materials furnished to, or obligations incurred by Holder.

B. No Possessory Rights. Except as provided in Section VII, Grantor acknowledges that Holder has no possessory rights in the Protected Property, nor any responsibility or right to control, maintain, or keep up the Protected Property. Grantor shall retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Protected Property.

C. Limitation on Obligations of Holder. Grantor is responsible for, and Holder shall have no responsibility whatsoever for, the operation of the Property, or the monitoring of hazardous and other conditions thereon, unless expressly undertaken by separate written agreement. Notwithstanding any other provision of this Conservation Easement to the contrary, this Conservation Easement shall not be construed such that: (1) it creates in Holder the obligations or liabilities of an "owner" or "operator" as those words are defined and used in the environmental laws, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 United States Code, Sections 9601 *et seq.*) or any successor or related law; (2) it creates in Holder's obligations or liabilities of a person described in 42 United States Code Section 9607(a)(3) or any successor or related law; or (3) Holder has any control over Grantor's ability to investigate and remediate any hazardous materials associated with the Protected Property. The term "environmental laws" includes, without limitation, any federal, state, local, or administrative agency statute, regulation, rule, ordinance, order, or requirement relating to environmental conditions or hazardous substances.

X. HOLDER'S AFFIRMATIVE RIGHTS

In addition to the public access rights granted to Holder's in Section VII.F ("Access") and in Section VII.A.8 ("Maintenance of Boundaries") herein, Holder has the following additional rights:

A. Holder's Right of Entry. In a reasonable manner, Holder has the right to enter the Protected Property, including over roads owned by Grantor or rights of way or other access ways available to Grantor for access to the Protected Property, for inspection, monitoring, and enforcement purposes (see Exhibits B and C).

B. Enforcement. Holder has the right to enforce this Conservation Easement by proceedings at law and in equity, including, without limitation, the right to require the restoration of the Protected Property to a condition in compliance herewith and receive damages for irremediable harm due to violation hereof. If Holder becomes aware of a violation or threatened violation of the terms of this Conservation Easement, then Holder must give written notice to Grantor and request that Grantor take corrective action sufficient to cure the violation or prevent the threatened violation, except where emergency circumstances or prevention of a threatened breach of this Conservation Easement require more immediate enforcement action. Wherever in this Conservation

Easement Grantor is afforded or retains a right to provide a plan or otherwise express an intention to take an action (regardless of whether Holder has any right to approve same), nothing in this Conservation Easement may be construed to impair Holder's right to seek injunctive or other relief as necessary to enforce the terms of this Conservation Easement against a violation or threatened violation hereof.

If a court determines that this Conservation Easement has been or is likely to be breached, Grantor will reimburse Holder for any reasonable costs of enforcement, including court costs, reasonable attorney's fees, and any other payments ordered by such court. Nothing contained in this Conservation Easement may be construed to preclude Grantor's or Holder's rights to recover damages from any third party for trespass or other violation of their respective rights in this Conservation Easement and the Protected Property.

C. Violations by Third Parties. Holder may not bring an enforcement action against Grantor for injury to or change in the Protected Property resulting from the actions of a third party trespasser or any person who has been permitted on the Protected Property by Holder pursuant to this Easement; resulting from natural causes or environmental catastrophe beyond Grantor's control, such as insect infestation, fire, flood, storm, and earth movement; or from any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Protected Property resulting from such causes. Grantor must take all reasonable actions, consistent with customary standards for the management of comparable areas used for the same purposes as the Protected Property, to prevent or halt third parties from violating this Conservation Easement; such reasonable actions shall include informing Holder of such violations and requesting that Holder take appropriate enforcement action. Grantor and Holder, together or unilaterally, may take such action as may be reasonably necessary to remedy acts of authorized or unauthorized third parties that constitute a violation of this Conservation Easement. Furthermore, in the event of violations of this Conservation Easement caused by acts of third parties, at Holder's option, Grantor agrees to join in any suit for the purposes of pursuing enforcement action. Grantor shall remain responsible for violations of this Conservation Easement caused by acts of Grantor's employees, contractors, agents, invitees, guests, licensees, and other expressly or impliedly authorized third parties. As to violations arising from the acts or omissions of unauthorized third parties, Holder, together or unilaterally, shall have a right to enforce this Conservation Easement directly against Grantor if Grantor fails to cooperate with Holder in all reasonable respects to halt or abate the violation resulting from such acts or omissions, or fails to promptly report a known or suspected violation to Holder.

D. Signs Identifying Holder. Holder has the right, after consultation with Grantor, to install and maintain small unlighted signs visible from public vantage points, to identify the Holder and inform the public and abutting property owners that the Protected Property is under the protection of this grant.

E. Third Party Enforcement Rights. Pursuant to the Order, MDEP shall have all of the enforcement rights granted to Holder pursuant to this Section X, and shall act as a third party enforcer of this Conservation Easement.

XI. CONSERVATION EASEMENT REQUIREMENTS UNDER STATE AND FEDERAL LAWS AND REGULATIONS

A. Conservation Purposes. This Conservation Easement is established exclusively for conservation purposes consistent with the provisions of the Internal Revenue Code, as amended at Title 26, U.S.C. Section 170(h)(1-6) and Sections 2031(c), 2055, and 2522, and under Treasury Regulations at Title 26 C.F.R. §1.170A-14 *et seq.*, as amended.

B. Alternative Qualified Holder. Holder is qualified to hold conservation easements pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3).

C. Assignment Limitation. The burden of the Conservation Easement created hereby shall run with the Protected Property and is enforceable against all future owners in perpetuity. The benefits of this Conservation Easement are not appurtenant to any particular parcel of land but are in gross.

This Conservation Easement may be transferred or assigned only to a qualified holder pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3) that is willing and able to hold this Conservation Easement for the Conservation Purposes and expressly agrees to assume the responsibility imposed on by the terms of this Conservation Easement. Any such assignee or transferee has the like power of assignment or transfer; provided, however, that any such further transfer or assignment is subject to the prior written approval of the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto). If the then-current Holder of this Conservation Easement ever ceases to exist or fails to carry out the responsibility imposed on the Holder by the terms of this Conservation Easement, then the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto), in consultation with Grantor, will identify and select an appropriate entity to which this Conservation Easement may be transferred. Any assignment or transfer of responsibility for the Conservation Easement must be in a recordable form and must be recorded in the Somerset County Registry of Deeds.

D. Termination and Proceeds. This Conservation Easement may only be extinguished or terminated by judicial order in a court of competent jurisdiction. It is the intention of the parties that any extinguishment or termination be approved by a court only if all of the Conservation Purposes of this Conservation Easement are impossible to accomplish, and if Grantor, Holder, and MDEP agree.

Grantor and Holder agree that the grant of this Conservation Easement gives rise to a property right which vests immediately in Holder and which has a fair market value equal

to the amount by which the fair market value of the Protected Property immediately before the imposition of this Conservation Easement is reduced by the restrictions imposed by this Conservation Easement, as of the date of the execution of this Conservation Easement (the Original Percentage Reduction).

If either Holder or Grantor receive notice of the actual or threatened exercise of the power of eminent domain (hereinafter a "Taking") with respect to any interest in or any part of the Protected Property, the party who receives the notice shall promptly notify the other and the parties may proceed jointly or either party may at its discretion take such legal action as it deems necessary to: (i) challenge the Taking; (ii) challenge the amount of allocation of any award tendered by the Taking authority; or (iii) otherwise participate in, challenge, or appeal such proceedings, findings, or awards. Any third party counsel and consultants (including appraisers) hired by either party shall be reasonably acceptable to the other party. Each party shall be responsible for its own costs and legal fees, absent written agreement of the parties.

Should this Conservation Easement be terminated or extinguished as provided in this Section XI.D, in whole or in part, Holder shall be entitled to be paid no less than a portion of any proceeds of sale, exchange, or lease computed as to the greater of (i) the Original Percentage Reduction as required under U.S. Treasury Regulations at 1.170-A-14(g)(6)(ii); or (ii) the increase in value of the Grantor's property interest resulting from such extinguishment, as determined by the court, or in the absence of such court determination, by the agreement of the parties or, in the absence of such agreement, by an independent appraiser mutually selected by Grantors and Holder. Holder shall use its share of the proceeds or other moneys received under this paragraph in a manner consistent, as nearly as possible, with the stated, publicly beneficial Conservation Purposes of this Conservation Easement.

E. <u>Amendment</u>. This instrument sets forth the entire agreement of the parties with respect to this Conservation Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Easement. Holder and Grantor, with the approval of MDEP, may amend this Conservation Easement to enhance the Conservation Values of the Protected Property or add to the restricted property, provided that no amendment shall (i) affect this Conservation Easement's perpetual duration, (ii) conflict with or be contrary to or inconsistent with the Conservation Purposes of this Conservation Easement, (iii) reduce the protection of the Conservation Values of the Protected Property, (iv) affect the qualification of this Conservation Easement as an "interest in land" or (v) affect the status of Holder as a "qualified organization." No amendment shall be effective unless the amendment complies with 33 M.R.S. § 477-A and is documented in a notarized writing executed by Holder, Grantor, and MDEP and is recorded among the land records of the County or Counties in which the Protected Property is located.

XII. GENERAL PROVISIONS

A. Applicable Law. This Conservation Easement is created pursuant to Maine's Conservation Easement statute 33 M.R.S. §§ 476 – 479-C, inclusive, as amended, and must be construed in accordance with the laws of the State of Maine and in accordance with the Conservation Plan.

B. Interpretation. If uncertainty should arise in the interpretation of this Conservation Easement, judgment should be made in favor of accomplishing the Conservation Purposes. Nothing in this Conservation Easement should be construed to permit any activity otherwise prohibited by law, nor to prohibit the imposition of further land use restrictions by agreement of the parties (provided that such further land use restrictions shall be consistent with the Conservation Purposes) or by operation of law.

C. Non-Waiver. The failure or delay of Holder, for any reason whatsoever, to discover a violation or initiate an action to enforce this Conservation Easement does not constitute laches, a waiver, or estoppel of its rights to do so at a later time. No act or failure to act by or on behalf of Holder, including failure to provide notice of a violation in accordance with Section X ("Holder's Affirmative Rights"), may be construed to constitute an approval, waiver, or estoppel in connection with Holder's rights to enforce the terms of this Conservation Easement.

D. Compliance. A party's obligation as Grantor, or successor owner of the Protected Property, will cease, if and when such person or entity ceases to have any present, partial, contingent, collateral, or future interest in the Protected Property, but only to the extent that the Protected Property is then in compliance with this Conservation Easement.

Responsibility of Grantor for breaches of this Conservation Easement that occur prior to transfer of title will survive such transfer; provided that the new owner shall also be responsible for bringing the Protected Property into compliance unless Holder releases the new owner. In certifying Grantor's compliance with the Forest Management Plan, the State may request, at Grantor's cost, current stand-typing information (forest type-size-density classes) and information on timber harvest levels by species group that has occurred since the date of the then-current Forest Management Plan. At Grantor's cost, Holder will provide certificates to third parties, indicating the extent to which, to Holder's knowledge, there is compliance of the Protected Property with the terms of this Conservation Easement or compliance on the part of Grantor with any obligation hereunder. Such certificate shall be delivered within thirty (30) days of Grantor's request and shall speak to the condition of the Protected Property as of the Holder's most recent inspection. If Grantor requests the certificate to be as of a more recent inspection date, the Holder shall conduct an inspection within forty-five (45) days of receipt of Grantor's written request thereof, which shall be at Grantor's cost.

E. Severability. If any provision of this Conservation Easement or the application of any provision to a particular person or circumstance is found to be invalid, the remainder of this

Conservation Easement and the application of such provision to any other person or in any other circumstance remain valid.

F. Standard for Holder Granting Discretionary Consent and Providing Prior Written Approval. Grantor and Holder acknowledge that, in view of the perpetual nature of this Conservation Easement, they are unable to foresee all potential future land uses, future technologies and future evolution of the land and other natural resources, and other future occurrences affecting the Conservation Purposes. Holder may determine whether (a) proposed uses or proposed improvements not contemplated by or addressed in this Conservation Easement or (b) alterations in existing uses or structures, are consistent with the Conservation Purposes. To make such determinations and when otherwise determining whether to provide its prior written approval when required by this Easement, the following standard applies: Holder may grant discretionary consent or provide prior written approval only if Holder has determined in its reasonable discretion that the proposed use is consistent with the Conservation Purposes, substantially conforms to the intent of this grant, meets any applicable conditions expressly stated herein, is consistent with the Conservation Plan, and does not result in a material, adverse impact on the Conservation Values of the Protected Property. Holder has no right or power to consent to any use that would result in building development on the Protected Property other than that which is expressly allowed herein, or that would be inconsistent with the Conservation Purposes or limit the term or terminate this Conservation Easement, or that would impair the qualification of this Conservation Easement or the status of Holder under any applicable laws, including 33 M.R.S. §§ 476 *et seq.*, and Section 170(h) or 501(c)(3) of the Internal Revenue Code, or successor provisions thereof.

G. Liens Subordinated. Grantor represents that as of the date of this grant there are no liens or mortgages outstanding against the Protected Property, except as listed in Exhibit A, and that such liens are subordinated to Holder's rights under this Conservation Easement. Grantor has the right to use the Protected Property as collateral to secure the repayment of debt, provided that any lien or other rights granted for such purpose are subordinate to Holder's rights under this Conservation Easement. Grantor must provide documentation of such subordination to Holder. Under no circumstances may Holder's rights be extinguished or otherwise affected by the recording, foreclosure, or any other action taken concerning any lien or other interest in the Protected Property.

H. Protections, Rights, and Immunities. Nothing in this Conservation Easement shall be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A (Maine's recreational use statute), 14 M.R.S. §§ 8101-8118 (the Maine Tort Claims Act), or any other applicable provision of law or equity. Holder specifically claims and retains all such protections, rights, and immunities.

I. Standing to Enforce. Nothing herein should be construed to grant the public standing to bring an action hereunder, nor any rights in the Protected Property by adverse possession or otherwise, provided that nothing in this Easement shall affect any existing public rights in or to the Protected Property acquired by common law, adverse possession, prescription

or other law, independently of this grant. Nothing in this Section XII.I shall limit the third-party enforcement rights provided to MDEP pursuant to Section X.E.

J. Holder's Ability to Exercise Rights. The parties acknowledge that the ability of Holder to exercise the rights or carry out the duties of Holder hereunder, including, without limitation, the installation, operation, and maintenance of any recreational improvements on the Protected Property, are subject to the availability of moneys appropriated or otherwise available to Holder and designated for such purposes. Nothing in this Conservation Easement creates any obligation on behalf of Holder in excess of such availability of moneys appropriated or otherwise available to Holder.

K. Certain Rights Preserved. Without limiting Grantor's rights to prohibit third parties from engaging in activities that may result in claims adverse to Grantor's interest in the Property, and without acknowledging the validity of such claims of third parties that may exist now or in the future, this Conservation Easement shall not impair any existing prescriptive right in the Property that may have been acquired by the public or Holder prior to the date of this Conservation Easement, or any other right the public or Holder may have to use or access the Protected Property pursuant to law.

L. Subsequent Transfers.

(a) Sale Subject to Conservation Easement. Except as specifically provided herein, nothing in this Conservation Easement shall be construed to prevent Grantor from selling or otherwise conveying or transferring the Protected Property to a third party, subject to the terms of this Conservation Easement.

(b) Incorporation of Conservation Easement Terms. Grantor must incorporate the terms of this Conservation Easement by reference in any deed or other legal instrument by which Grantor divests itself of the Protected Property. Further, Grantor must notify Holder of the transfer of the Protected Property at least thirty (30) days prior to the date of such transfer. Grantor must provide a complete copy of this Conservation Easement to any transferee of any rights in the Protected Property before any such transfer and must provide Holder with a copy of any transfer documentation upon completion of such transfer. The failure of Grantor to perform any act required by this paragraph shall not impair the validity of this Conservation Easement or limit its enforceability in any way.

Notwithstanding anything to the contrary herein, the conveyance of the Protected Property includes all appurtenant rights associated with the Protected Property, including any and all rights of access thereto. In addition, upon conveyance of all or any portion of the Protected Property, consistent with the requirements in Section VII.B.1, Grantor may reserve rights of access across the lands so conveyed or other rights and easements for the benefit of Grantor's retained lands.

[signatures on the following pages]

XIII. HABENDUM AND SIGNATURES

TO HAVE AND TO HOLD the said Conservation Easement unto the said Holder and their successors and assigns forever.

IN WITNESS WHEREOF, _____ has caused this Conservation Easement to be executed by its duly authorized representative as of this ___ day of _____, 2025.

Signed, sealed and delivered
in the presence of: _____

_____ By: _____
Name:
Its:
Hereunto duly authorized

State of Maine
County of _____, ss. _____ ____, 2025

Personally appeared the above named _____, in his capacity as the _____ of _____ and acknowledged the foregoing instrument to be his free act and deed in his said capacity, on behalf of said _____.

Before me,

_____
Notary Public/Maine Attorney-at-Law
Name: _____

XIV. ACCEPTANCE BY STATE

Pursuant to 12 M.R.S. § 1850(1) & 33 M.R.S. § 477(2), Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, hereby accepts this Conservation Easement on behalf of the STATE OF MAINE.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE, Bureau of Parks and Lands
Department of Agriculture, Conservation and Forestry

By: _____
Andrew R. Cutko
Its Director, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

Pursuant to 33 M.R.S. § 477(2) and 38 M.R.S. § _____, Melanie Loyzim, Commissioner of the Department of Environmental Protection, hereby accepts the third-party enforcement rights contained in this Conservation Easement on behalf of the Department of Environmental Protection.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered **Department of Environmental Protection**

By: _____
Melanie Loyzim
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Melanie Loyzim, Commissioner of the Department of Environmental Protection and acknowledged acceptance of the above and foregoing instrument to be her free act and deed in her said capacity, and the free act and deed of the Department of Environmental Protection.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XV. CONSENT OF COMMISSIONER

Pursuant to 12 M.R.S. § 1850(1), the Commissioner of the Department of Agriculture, Conservation and Forestry, hereby gives consent to acquisition by the STATE OF MAINE, Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, of the above and foregoing Conservation Easement.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE
Department of Agriculture, Conservation and Forestry

By: _____
Amanda E. Beal
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Amanda E. Beal, Commissioner of the Department of Agriculture, Conservation and Forestry, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XVII. ATTACHMENTS TO CONSERVATION EASEMENT

EXHIBIT A – Legal Description of the Protected Property

EXHIBIT B – Survey Plan of the Protected Property

EXHIBIT C – Map of Roads and Trails

EXHIBIT D – Map of Wetlands and Streams

EXHIBIT E – Existing Plantations located on the Protected Property

Exhibit A

Legal Description of the Protected Property

Exhibit B

Survey Plan of the Protected Property

Exhibit C

Map of Roads and Trails

Exhibit D

Map of Wetlands and Streams

Exhibit E

Existing Plantations located on the Protected Property

EXHIBIT D-2

PIERCE ATWOOD LLP

LISA A. GILBREATH

Merrill's Wharf
254 Commercial Street
Portland, ME 04101

PH 207.791.1397
FX 207.791.1350
lgilbreath@pierceatwood.com

pierceatwood.com

Admitted in: KS, MA, ME, MO, NY

October 24, 2025

VIA MELS PORTAL

Ms. Dawn Hallowell
Maine Department of Environmental Protection
Bureau of Land Resources
17 State House Station
Augusta, ME 04333-0017

Re: Condition Compliance Submission for Condition #39 of Maine Department of Environmental Protection Site Location/NRPA Permit Numbers #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 and for Condition #10 of the Maine Board of Environmental Protection Permit Numbers L-27625-26-F-Z, L-27625-TG-G-Z, L-27625-2C-H-Z, L-27625-VP-I-Z, L-27625-IW-J-Z, L-27625-26-AB-Z for the New England Clean Energy Connect Project

Dear Ms. Hallowell:

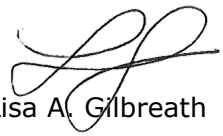
On behalf of NECEC Transmission LLC (NECEC LLC), please find enclosed the following materials:

- Clean revised Forest Management Plan (and all exhibits thereto), Attachment A
- Redline format Forest Management Plan (redline comparison of July 16, 2025 Forest Management Plan filing), Attachment B

As indicated in the Bureau of Parks and Lands' (BPL's) October 8, 2025 letter to the Department, since NECEC LLC filed the original Forest Management Plan on July 16, 2025, BPL has engaged in its standard practice of iterative review and discussion with landowner Weyerhaeuser. The attached redline format shows the revisions that were made during BPL's review and in response to its request for supplemental information from Weyerhaeuser. The attached clean revised Forest Management Plan, including all attachments thereto, is submitted to the Department for its review and approval pursuant to Condition #39.

Please let me know if you have any questions.

Sincerely,



Lisa A. Gilbreath

Enclosures
cc (via email): Service List (last updated 2025)

ATTACHMENT A
FOREST MANAGEMENT PLAN
(CLEAN)

Forest Management Plan

for the

New England Clean Energy Connect

Upper Kennebec Conservation Easement

October 2025

Plan Preparation:

Mark W. Rabon, LF3159
Ben Kamps, LF3796
Ed Meddaugh, Biometrician
Ray Ary, Biologist
October 2025

Weyerhaeuser

PO Box 646
Bingham, Maine 04920

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1.0 Introduction

This Forest Management Plan (FMP) dated July 14, 2025, governs land covered by the New England Clean Energy Connect (NECEC) Upper Kennebec Conservation Easement granted by Weyerhaeuser Company, a Washington corporation, with a place of business in Bingham, Maine (Grantor or Weyerhaeuser) to the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (Holder) on _____ and recorded in Book _____, Page _____ in the Somerset County Registry of Deeds (Conservation Easement). The land covered by the Conservation Easement (see **Appendix A**) and subject to this FMP is referred to as the "Protected Property".

On May 11, 2020, the Maine Department of Environmental Protection (MDEP) completed its 29-month application review and issued an Order approving the NECEC project Site Location of Development Act and Natural Resources Protection Act permit applications. Special Condition #39 of the MDEP Order requires the development of a Conservation Plan to permanently conserve 40,000 acres in the vicinity of NECEC project Segment 1 (Beattie Township to The Forks Plantation) to compensate for the fragmenting effect and the related edge effect of Segment 1 on habitat in the region by promoting habitat connectivity and conservation of mature forest areas. The required area to be conserved was increased to 50,000 acres by the Maine Board of Environmental Protection (Board) Order dated July 21, 2022, that affirmed the MDEP Order. Collectively, the MDEP Order and the Board Order are referred to herein as the "Permit Orders."

In compliance with the Permit Orders, NECEC Transmission LLC (NECEC LLC), along with Weyerhaeuser and the Holder, have developed the accompanying Conservation Plan, which conserves more than 50,000 acres of largely contiguous property adjacent to Segment 1 (the Protected Property), to be managed for mature forest and habitat connectivity, including wildlife travel corridors within riparian areas and between mature forest habitats.

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 of stewardship funding (e.g., funding for monitoring and enforcement) needed to support achievement of the goals of the Conservation Plan; and
- Ensure the MDEP will have third party enforcement rights.

Pursuant to Section 3.3 of the Conservation Easement, Forest Management Activities, as defined in **Appendix B**, on the Protected Property, shall be conducted in accordance with this FMP. The primary goal of this FMP is compensation for the fragmenting effect of the NECEC on habitat in the vicinity of that transmission line and the related edge effect by promoting habitat connectivity and conservation of mature forest areas. This FMP establishes how, consistent with the primary goal of the Conservation Plan, the Protected Property will be managed, including providing blocks of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitats. This will be accomplished by modifying existing silvicultural practices on the property to create a shifting mosaic from early successional through mature forest blocks, which increases overall mature forest habitat and provides habitat connectivity, and by establishing permanent wildlife travel corridors along riparian areas. Compared to current management practices, the proposed conservation management practices described herein are intended to result in an increase from 40% in the 35+ foot age class and 13% in the 50+ foot age class today, to 65% in the 35+ foot age class and 50% in the 50+ foot age class by approximately 2065.

2.0 Property description

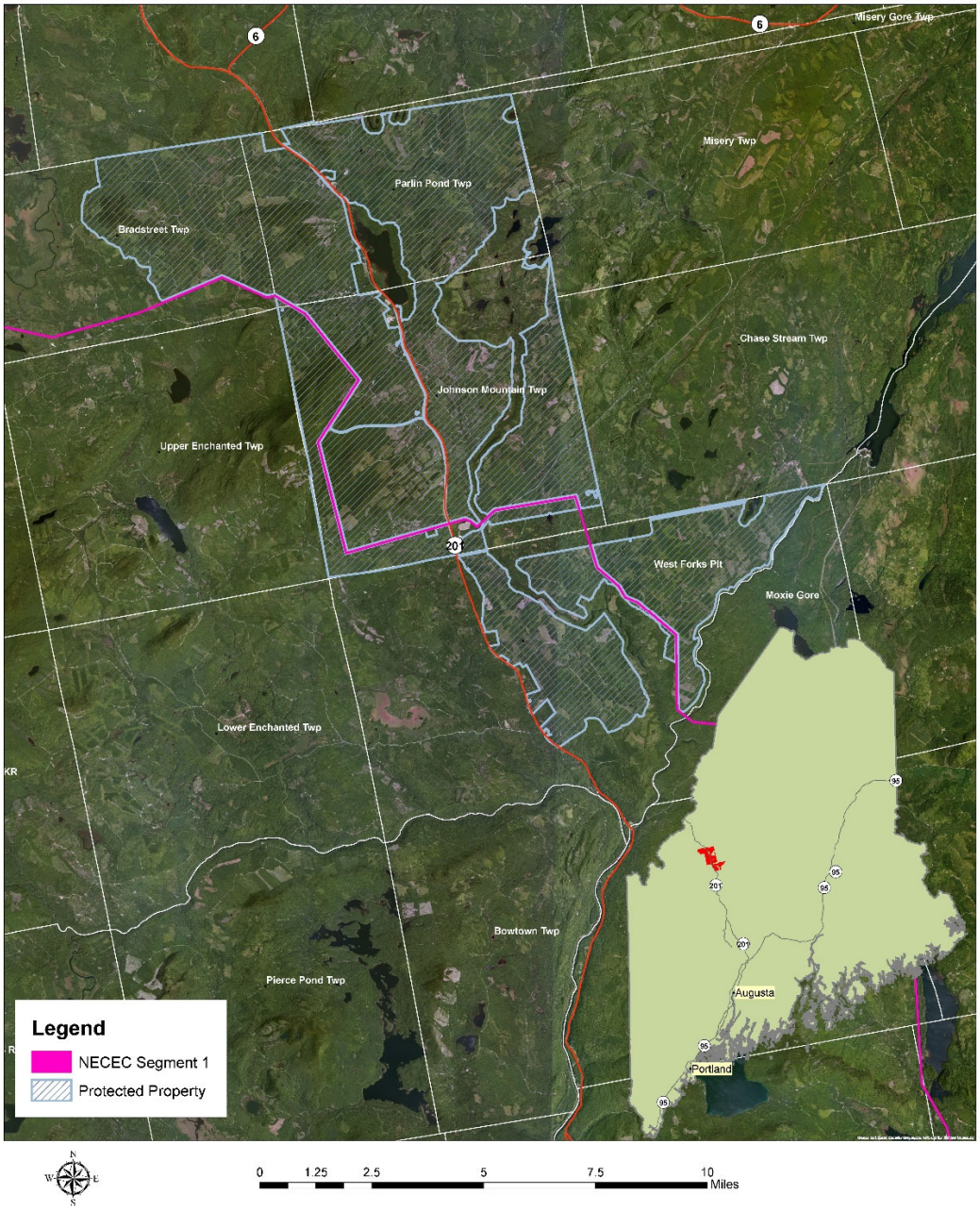
2.1 Location

The Protected Property, depicted in **Figure 1** and **Appendix C** consists of more than 50,000 acres of largely contiguous property adjacent to Segment 1 of the NECEC, an approximately 53.1-mile-long portion of the transmission line that starts at the Maine/Quebec border in Beattie Township and continues to The Forks Plantation. It is to be managed for mature forest and habitat connectivity, including wildlife travel corridors within riparian areas and between mature forest

habitats. The Protected Property is located in Bradstreet Township, Johnson Mountain Township, Parlin Pond Township, and West Forks Plantation.

Segment 1 of the NECEC bisects the Protected Property, ensuring that any fragmenting or edge effect caused by the transmission line during its operational life is mitigated by establishing the conservation measures described herein in the immediate vicinity of Segment 1 in perpetuity.

Figure 1. Map of the Protected Property.



2.2 Region

The Protected Property further enhances and extends a large landscape of protected land in the Upper Kennebec Region due to its adjacency to existing conservation lands. To the northwest is the Leuthold Forest Preserve (16,934-acres), Moose River/#5 Bog Conservation easement (4,790-acres), and the Attean Pond Conservation Easement (20,000 acres); the Cold Stream Public Land Unit (8,150-acres) extends north/south and runs through the Protected Property; and the Moosehead Conservation Easement (355,449-acres) lies to the east and north. The Protected Property fills a gap between these areas, creating almost 450,000 contiguous acres in conservation.

2.3 Ownership History

Weyerhaeuser, or its predecessor in interest, has owned the property since 1998. The property was conveyed to SDW Timber II, L.L.C. in 1998, via Quitclaim Deed without Covenant from S.D. Warren Company, which deeds are recorded at Book 2489, Page 228 (Bradstreet, T4 R7, BKP WKR), Book 2490, Page 81 (Johnson Mountain, T2 R6, BKP WKR), Book 2490, Page 228 (Parlin Pond, T3 R7, BKP WKR), and Book 2491, Page 67 (West Forks, T1 R5, BKP WKR). In December of 1998, SDW Timber II, L.L.C. changed its name to Plum Creek Maine Timberlands, L.L.C., as evidenced by document recorded at Book 2605, Page 151, Records of Somerset County. In September of 2016, Plum Creek Maine Timberlands, L.L.C. merged with and into Plum Creek Timberlands, L.P., and contemporaneously Plum Creek Timberlands, L.P., merged with and into Weyerhaeuser Company, as evidenced by Affidavit of Title recorded in the Records of Somerset County, Document 14552, Book 5097, Page 70.

2.4 Boundary Lines

A legal description, including a property map, will be developed by Weyerhaeuser and provided to Holder prior to implementation of the Conservation Plan. A boundary line survey of the Protected Property shall be completed within 24 months following the conveyance of the Conservation Easement in accordance with Paragraph II. A. *Words of Conveyance*.

The boundary line survey shall include marking features such as roads, rights-of-way, structures, and other improvements. The boundary line survey shall be recorded in accordance with the Conservation Easement, and Weyerhaeuser shall cause any boundary lines of the Protected Property not currently marked and painted to be marked and painted. Survey data will be uploaded to Weyerhaeuser's FMS System with a copy of the boundary shapefiles being shared with the Holder.

2.5 Property Tax Status, Zoning, and Legal Obligations

Table 1 below includes each Maine Land Use Planning Commission (LUPC) Account Parcel Number (APN), parcel location address, whether the parcel is enrolled in the Maine Tree Growth Program, and LUPC development subdistrict as established by Chapter 10 of LUPC's rules for the Protected Property. The Protected Property is subject to the LUPC's rules, as well as the Maine Forest Practices Act, 12 MRS §§ 8866 *et seq.*, as well as the Maine Forest Service's Chapter 20 Forest Regeneration & Clearcutting Standards. While title work is ongoing, to the best of Weyerhaeuser's knowledge the Protected Property is subject to no lease agreements, deed restrictions, covenants, or similar land use restrictions relating to forestry.

Table 1. Maine LUPC Account Parcels for the Protected Property				
APN	APN2	LocationAddress	CountyZoning	Enrolled in Maine Tree Growth?"
SO020011.15	25839011.15	Parlin Pond Twp, ME	P-RR	yes
SO014012	25829012	Johnson Mountain Twp, ME 04945	M-GN	yes
SOP05184	25330184	West Forks Plt, ME 04985	P-WL1	Very small tax parcel included in SOP05185 enrollment in tree growth
SOP05185	25330185	West Forks Plt, ME 04985	M-GN	yes
SO020015	25839015	Parlin Pond Twp, ME	M-GN	yes
SO022011	25813011	Bradstreet Twp, ME 04945		yes
SO014011.12	25829011.12	Johnson Mountain Twp, ME 04945	M-GN	yes
SOP05164	25330164	0 Dead Stream Rd, West Forks Plt, ME 04985	P-SL2	Yes, subject to a small access corridor to be removed in 2027
SO014011.1	25829011.1	Johnson Mountain Twp, ME 04945	M-GN	yes
SO014011.2	25829011.2	27 Owls Holw, Johnson Mountain Twp, ME 04985	M-GN	yes
SO020014	25839014	Parlin Pond Twp, ME 04945	P-WL3	yes
SO020011	25839011	Parlin Pond Twp, ME 04945	M-GN	yes
SOP05074	25330074	0 N Old 201 Rd, West Forks Plt, ME 04985	M-GN	What portion of tax ID SOP05074 WY does own is enrolled in tree growth, subject to a small access corridor to be removed in 2027
SOP050818	253300818	West Forks Plt, ME 04985	M-GN	What portion of tax ID SOP050818 WY does own is enrolled in tree growth
SOP05131	25330131	West Forks Plt, ME 04985	M-GN	What portion of tax ID SOP05131 WY does own is

				WY does own is enrolled in tree growth
SOP05171	25330171	West Forks Plt, ME 04985	M-GN	yes
SOP05172	25330172	West Forks Plt, ME 04985	M-GN	yes
SOP05165	25330165	West Forks Plt, ME 04985	M-GN	yes
SOP05132	25330132	West Forks Plt, ME 04985	M-GN	What portion of tax ID SOP05132 WY does own is enrolled in tree growth
SOP05142	25330142	West Forks Plt, ME 04985	M-GN	What portion of tax ID SOP05142 WY does own is enrolled in tree growth
SOP05141	25330141	West Forks Plt, ME 04985	M-GN	What portion of tax ID SOP05141 WY does own is enrolled in tree growth
SOP050917	253300917	3681 US Route 201, West Forks Plt, ME 04985	M-GN	What portion of tax ID SOP050917 WY does own is enrolled in tree growth

3.0 General Condition of the Forest

3.1 Forest Description

The Protected Property is a forested land area of significant breadth and diversity, with outstanding values including sizeable blocks of mature forest habitat. Mature Forest Habitat is defined as forest stands consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well distributed standing dead and downed trees, as described in Section VII.A.6 of the Conservation Easement. It is interspersed with upland, riparian, and wetland vegetative communities composed of coniferous, deciduous, and mixed-wood forest of varied age classes with approximately 40% of the area currently 35 feet in height or taller. Large blocks of the property have ecological importance as wildlife and fisheries habitat, including for species that prefer mature forest such as pine marten and white-tailed deer as well as brook trout, landlocked salmon, other fish, and many species of forest interior dwelling birds, waterfowl, reptiles, and amphibians. The Protected Property includes extensive bogs, wetlands, rivers, an abundance of seasonal and perennial streams, lakes, remote ponds and other water bodies, and unique natural features, all of which will benefit from the overall conservation of the Protected Property. The intensive conservation management described in the FMP would protect, maintain, and enhance the habitat value for these species.

The forests consist of approximately 17% hardwood stands, 40% mixed-wood stands, and 43% softwood stands, which are of varied age classes and species. Stands with trees under 35 feet in height comprise 60% of the acreage with only 13% currently taller than 50 feet.

3.2 Forest Health

The Protected Property is managed by professional foresters and biologists, in accordance with state law, utilizing forest management practices that include scientifically sound silviculture and best management practices. Foresters are responsible for field review of potential local forest health problems and concerns as they conduct their normal field duties and report observations to Supervisors who contact appropriate agencies as needed. Regular training is conducted by agencies such as the Maine Forest Service regarding the detection and recognition process for emerging forest health concerns such as Emerald Ash Borer, Hemlock Wooly Adelgid, Beech Leaf Disease, and Spruce Budworm.

Spruce budworm is a significant emerging threat to the health of balsam fir on the Protected Property. The current state-wide spruce budworm mitigation strategy includes insect monitoring and hotspot identification through extensive L2 surveys, forest inventory analyses and risk

assessments, and active engagement with the Maine Spruce Budworm (SBW) Task Force on targeted management strategies.

As needed, quarantine associated agreements and any required compliance records are kept on hand and foresters assist contractors to ensure that forest product and equipment movement off-site is in compliance.

3.3 Fire Protection

To protect timber resources, fire hazard reduction is employed broadly, and fire suppression is practiced in wildfire events. Contact with various state agencies with an emphasis on Maine Forest Service is used to ensure coordinated fire responses, such as meetings with state fire control officials in advance of an upcoming fire season to review high hazard areas.

All professional foresters, contract loggers, haulers, and road crews working on the land have fire suppression systems and are trained in their use.

The public is prohibited from building outdoor fires in fire hazard areas during periods of fire emergency and can only have fires in designated pre-approved areas. Insect infestation control and quarantine efforts can also reduce vulnerability to fire events. Healthy forest conditions are fostered through timely and careful harvests carried out by trained loggers under the supervision of professional foresters.

3.4 Hydrology

The Protected Property includes extensive bogs, wetlands, rivers, an abundance of seasonal and perennial streams, lakes, remote ponds and other water bodies, and unique natural features, all of which will benefit from the overall conservation of the Protected Property.

The Protected Property is located entirely within the upper Kennebec River watershed area - See Watershed Map in **Appendix D**. Significant streams running through the Protected Property include Bean Brook, Parlin, and Cold Streams. In total, the Protected Property includes approximately 88 miles of rivers and perennial streams, representing an extensive network of riparian corridors within the lands to be conserved. As outlined further in Section 4.2.3, two levels of buffers will be established along riparian corridors on the Protected Property: “No-Harvest Buffers” and “Mature Forest Habitat Buffers”. These Perennial Stream Buffers run from the Normal High-Water Line on the approximately 88 miles of Perennial Streams. For Riparian Wetlands, the Normal High-Water Line where the buffer begins is the upland edge of the wetland, not the edge of the open water within the stream corridor. These buffers will improve and maintain habitat

connectivity by creating Mature Forest Habitat running along Perennial Streams that will allow for increased connectivity to Mature Forest Habitat elsewhere on the Protected Property.

3.5 Topography and Soils

The topography and soils on the Protected Property are typical of forested, post-glaciated landforms. Several mountains that are part of the larger Boundary Mtn complex that runs along the border between Quebec & Canada are contained within the Protected Property. These peaks include Johnson Mtn, Bean Brook Mtn, and Catheart Mtn. Some areas of exposed bedrock are present on these slopes and scattered throughout the Protected Property.

The parent soil within the Protected Property is largely glacial derived and composed of glacial till, sandy outwash, and several prominent gravel esker features. Natural Resources Conservation Service (NRCS) information indicates a diverse soil distribution across the Protected Property with approximately fifty unique soil types as listed and mapped in the Appendix D – Soil Maps and Map Unit Details. The three largest soil types by area contained within the Protected Property are shown below:

DEC—Danforth-Elliottsville association, 3 to 15 percent slopes, extremely stony covering approximately 13% of Protected Property (NRCS).

CPB—Colonel-Pillsbury-Peru association, 0 to 8 percent slopes, very stony covering approximately 8% of the Protected Property (NRCS).

LTC—Hogback-Rawsonville complex, 4 to 25 percent slopes covering approximately 7% of the Protected Property (NRCS).

Complete soils information can be found in **Appendix E**.

4.0 Permit Order Compliance and Conservation Plan

Consistent with the primary goal of the Conservation Plan, this FMP governs how the Protected Property will be managed to increase and maintain habitat connectivity, establish Perennial Stream Buffers, promote and maintain mature Forest Stands, and achieve Mature Forest Habitat. This will, over time, provide significantly more and larger blocks of habitat for species preferring mature forest conditions and will improve, maintain, and create additional wildlife travel corridors along riparian areas and between Mature Forest Habitats that would not otherwise be present on the Protected Property.

4.1 Conservation of Mature Forest Areas

The Protected Property will be permanently managed to achieve and maintain a minimum of 50% of the Productive Forest as Mature Forest Habitat after approximately 2065. While the MDEP[1] and the Board[2] Permit Orders found that mature forest begins to provide benefits to species preferring Mature Forest Habitat when those forest stands reach 35 feet in height, in concurrence with the Holder and the Maine Department of Inland Fisheries & Wildlife, and as agreed upon to meet the terms of the Permit Orders, this FMP achieves a significantly greater height and basal area to the benefit of species preferring Mature Forest Habitat and travel corridors. Under this FMP, Forest Stands reach the condition of Mature Forest Habitat when a minimum basal area threshold of 80 square feet per acre of live trees with 60 square feet of 50' tall or taller trees is reached. This target level threshold will be then maintained in perpetuity utilizing Shifting Mosaic Forest management practices that promotes a dynamic landscape characterized by a diversity of growth stages, age classes, and species composition. Currently in 2025, the Productive Forest area that meets the Mature Forest Habitat definition on the Protected Property is approximately 13%, at just over 6,000 acres.

As shown in **Figure 2**, under this FMP, over the next forty years the percentage of trees over 50 feet in height is intended to increase from approximately 13% today to 50% by approximately 2065. To ensure this target is met, mature forest conditions will be monitored and managed by targeting particular milestones which will be reviewed as part of each annual meeting between Grantor and Holder. The target goal of 50% of productive acres in mature forest by 2065 will then be sustained in perpetuity.

Climate change effects may affect the growth models used as a basis for the Mature Forest Habitat projections outlined in this FMP, including the anticipated ten-year milestones. Climate

[1] MDEP Order at 79: "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…."
[2] Board Order at 53: "While vegetation with a minimum height of 35 feet is not equivalent to full canopy height vegetation in terms of the cover it provides, the record evidence supports that vegetation of 30 feet and taller aids wildlife movement."

change increases uncertainty about future forest conditions, which cannot be predicted by current growth models. A changing climate will likely affect tree growth rates, mortality, disturbance patterns and the distribution of tree species after disturbances. Models suggest shifts in the ranges of trees and other plants, animals, and pests. More frequent extreme wildfires and weather events are expected to alter disturbance regimes and will require adjustments in forest operations and planning. Management strategies to address these uncertainties must change over time, guided by the best available science.

Figure 2. Mature Forest Milestones - Estimated Mature Habitat at each 10-year increment on Productive Acres

Mature Forest Milestones	
2025	13%
2035	20%
2045	30%
2055	40%
2065	50%

This represents a significant increase compared to current conditions, as well as to the projected forest conditions in 2065 under management practices that follow only the minimum state standards or, alternatively, if the property were developed. A visual depiction of current forest heights by age class is included as **Figure 3**, and a visual depiction of forest heights by age class anticipated in 2065 and beyond under the FMP is included as **Figure 4**. Note that the 2025 Mature Forest Milestone acreage at 13% is derived exclusively from the ≥50 Height Group as depicted in Figure 3.

Figure 3. 2025 Forest Heights by Age Class Under Current Management

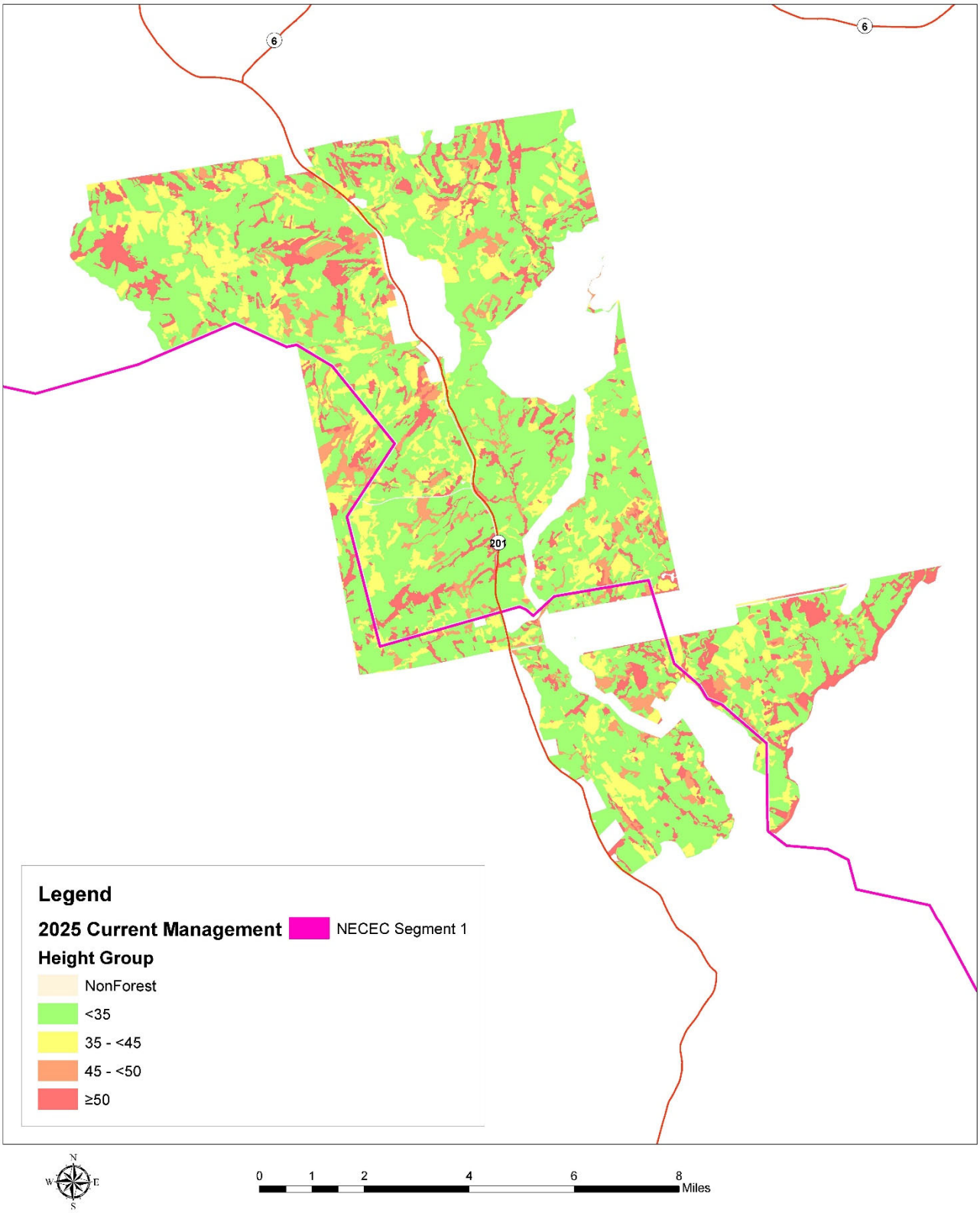
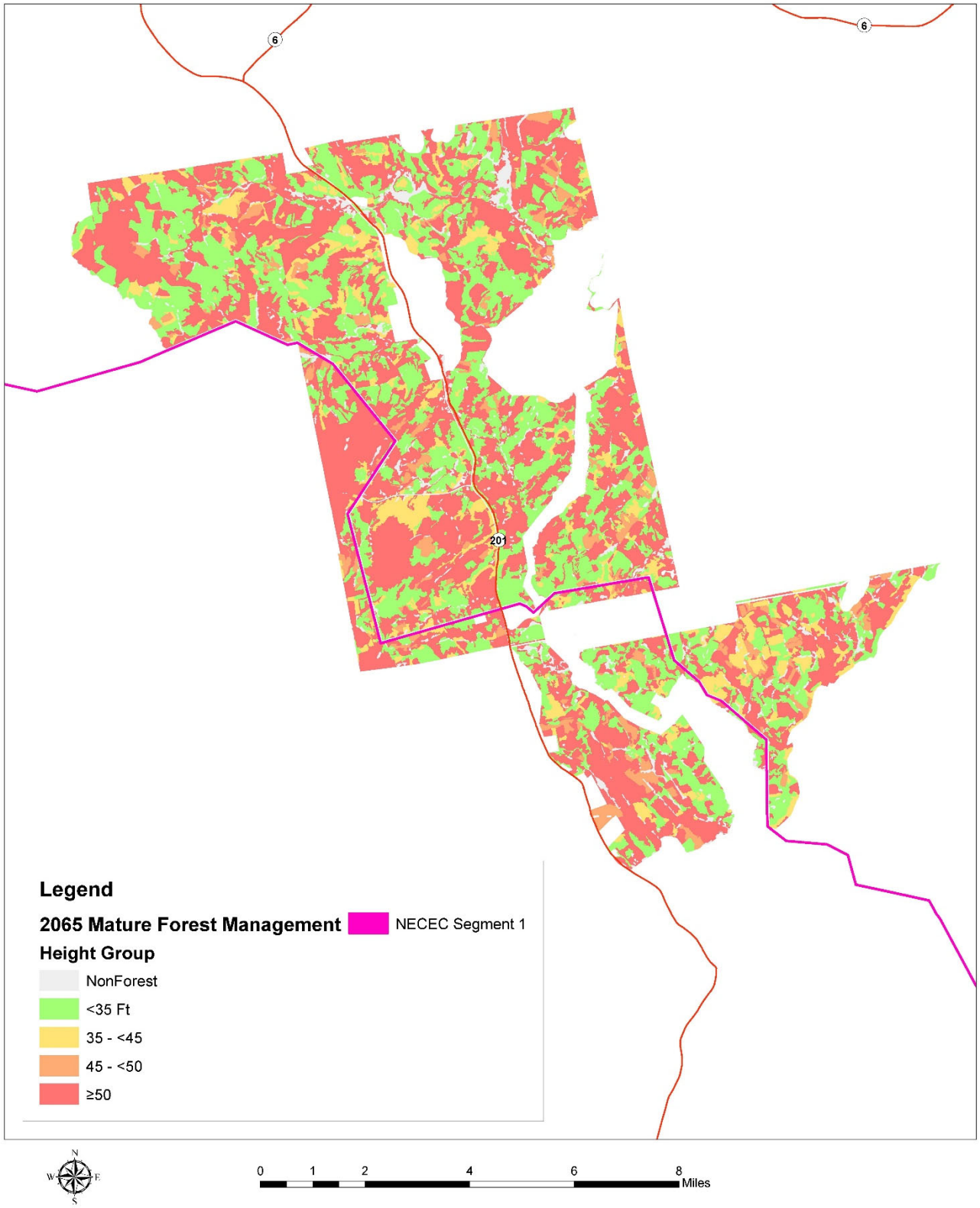


Figure 4. Anticipated 2065 Forest Heights by Age Class Under Proposed Management



4.2 Harvest Planning, Mature Forest Measurement, and Road Construction Approach

Ongoing harvests, including those in mature stands, are planned throughout the interim period leading up to 2065. The Forest Management Plan is structured to ensure that by 2065, at least 50% of the productive forestland will reach mature forest condition, and that all interim milestones will be met.

As stated in Section 5.3, the Protected Property will be harvest scheduled at a minimum of every 10 years with Woodstock using the newest inventory available, or more frequently as needed to account for significant storms, forest health events, or other impacts to the Mature Forest Habitat. The model will be run to ensure the mature milestones are met, and measurements will be taken to confirm milestones are reached. Harvest activities are scheduled and implemented in accordance with the milestones outlined in Section 5.3, with progress tracked at regular intervals (see Table: Mature Forest Milestones). The one-year and ten-year planning maps are shown below.

One and 10-12 Year Potential Harvest Areas

The maps below display the current modeled potential harvest areas for the Protected Property for 2026 in **Figure 5**, and over the next 10-to-12-year timeframe in **Figure 6** (both are for planning purposes only and are subject to change). Also shown are the increased perennial buffers along with the approximate scheduled harvest period. No harvesting activity is planned within the No-Harvest Buffer. Within the Mature Forest Buffer, approximately 50 acres of thinning treatments are planned annually from 2026 through 2036. Such treatments will not delay development of Mature Forest Habitat within such buffers.

Figure 5. Current Targeted Harvest Areas for 2026

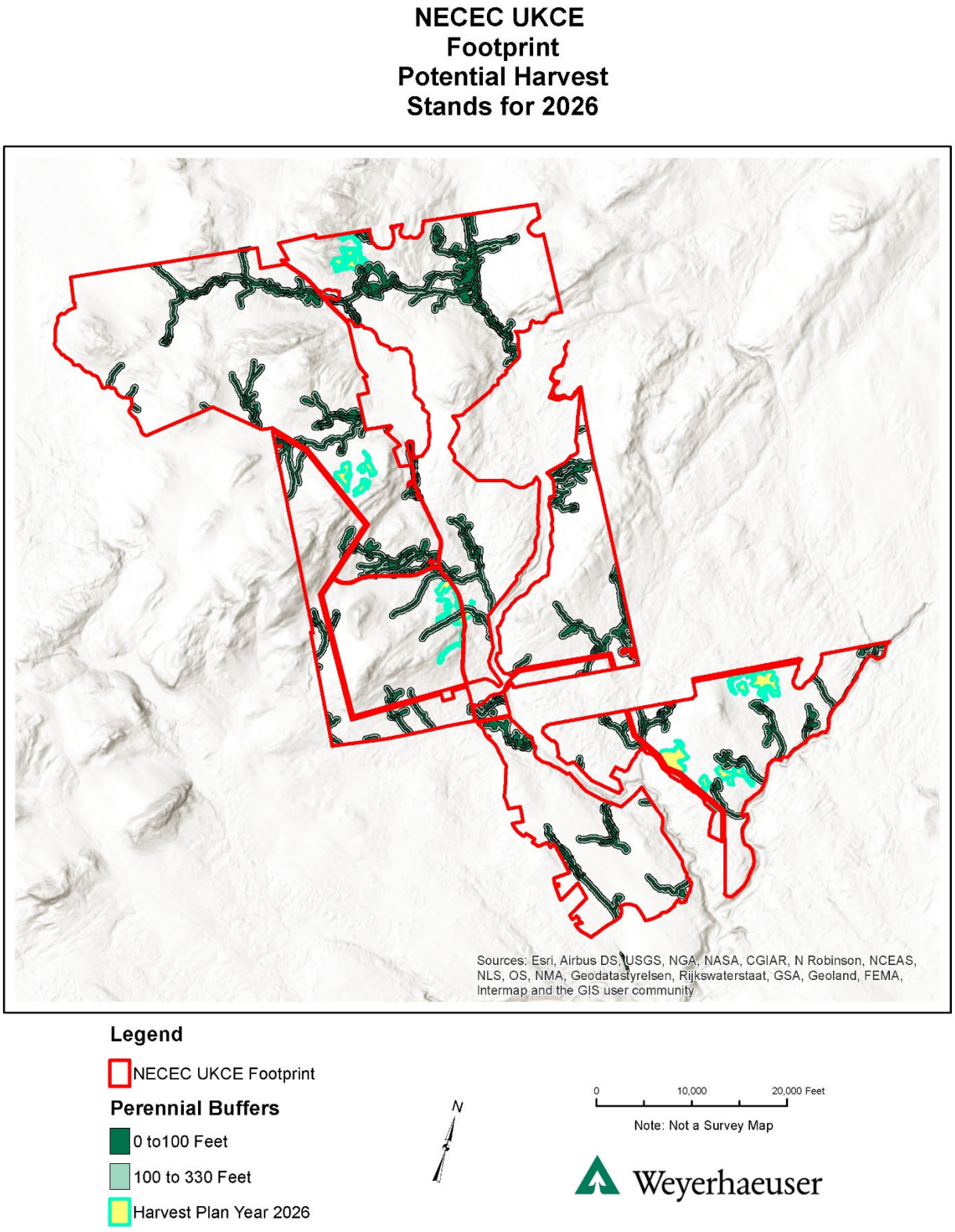
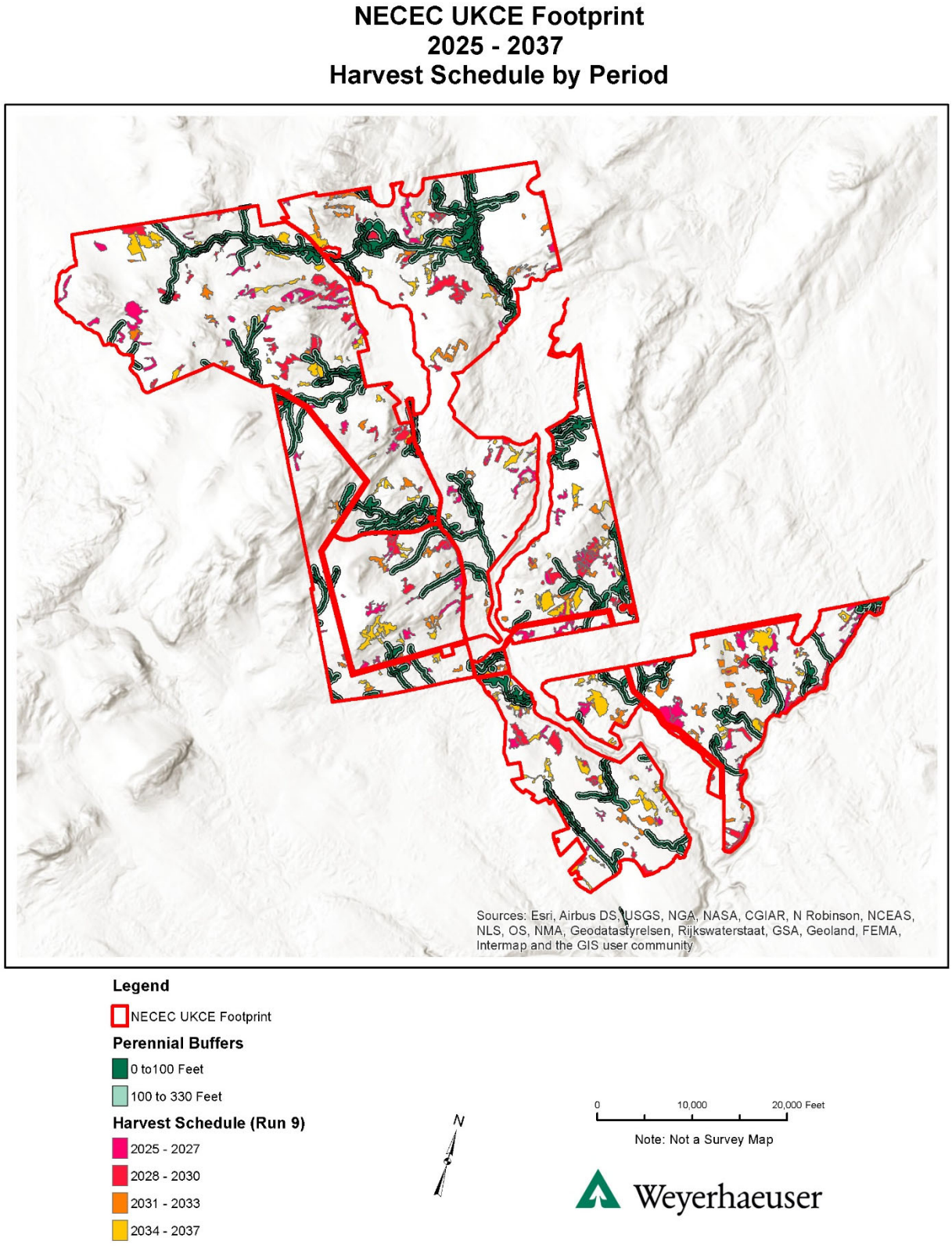


Figure 6. 10-12 Year Potential Harvest Areas for the Protected Property



Due to the format of the existing forest inventory data, the current measurement of the mature forest class includes all stands within the 45 to 55-foot majority height strata. This methodology is consistent with the stratification and stand-level estimation procedures described in Section 5.1.

Weyerhaeuser intends to conduct a comprehensive remeasurement of mature forest acreage by the end of 2026. The updated inventory will enable more precise classification of mature forest stands and will inform any necessary revisions to harvest plans to ensure attainment of the first milestone of 20% mature forest by 2035.

Harvest and Road planning on the Protected Property are guided by the principles of shifting mosaic forest management. This approach maintains a dynamic landscape characterized by a diversity of growth stages, age classes, and species composition, thereby promoting habitat connectivity and the development of mature forest blocks. Harvest schedules are developed using stand-level inventory data, remote sensing (LIDAR), and growth models (see Sections 5.3 and 5.4). Even-aged and select harvest regimes are implemented to meet mature forest milestones, with thinning and regeneration practices tailored to site conditions and CE requirements. Harvests are planned to maintain or enhance mature forest habitat, particularly within designated buffers and riparian corridors (see Section 4.3.3).

Road construction and maintenance are conducted in accordance with CE requirements and Best Management Practices (BMPs) to minimize soil erosion, protect water quality, and maintain habitat connectivity (see Section 5.6; Appendix G: BMP Standards). The establishment of new roads or relocation of existing roads requires prior written approval from the Holder, and all activities are supervised by licensed professional foresters. Existing roads within mature buffers are maintained but not expanded without approval, ensuring compliance with CE standards.

All harvest and road planning activities are conducted to meet the requirements outlined in the Conservation Easement, ensuring the perpetual conservation of mature forest habitat and habitat connectivity.

4.3 Habitat Connectivity

4.3.1 Adjacent Conservation Lands

The Protected Property provides and enhances extensive connectivity to adjacent conservation lands including the 16,934-acre Leuthold Forest Preserve, the 4,790-acre Number Five Bog Conservation Easement, and the 20,000 acre Attean Pond Conservation Easement to the northwest; the 8,150-acre Cold Stream Public Land Unit that lies within the Protected Property running north/south; and the 355,449-acre Moosehead Region Conservation Easement located to

the east and north of the Protected Property which also ties into other conservation areas in the region.

4.3.2 Habitat Connectivity Between Mature Forest Areas

This FMP increases the prevalence of Mature Forest Habitat blocks, which enables greater habitat connectivity within and between mature forest areas. To further illustrate the transition to mature forest, by approximately 2065 the expected acreage contained in stands greater than 200 acres having a height class greater than 35 feet would increase from approximately 16,700 acres under the current management regime to approximately 28,400 acres under the FMP. Similarly, the expected acreage in stands larger than 200-acres with a culminative height class greater than 50-feet would increase from approximately 7,750 acres under the current management regime to approximately 18,600 acres. The exact acreages of forest blocks in these height classes will vary over time.

4.3.3 Riparian Corridors/Buffers

Two levels of buffers will be established along riparian corridors on the Protected Property: "No-Harvest Buffers" and "Mature Forest Habitat Buffers" as defined below. These Perennial Stream Buffers run from the Normal High-Water Line on the approximately 88 miles of Perennial Streams. For Riparian Wetlands, the Normal High-Water Line - marking the start of the buffer - is defined as the upland edge of the wetland, rather than the edge of the open water within the stream corridor. These buffers are designed to maintain and enhance habitat connectivity by creating Mature Forest Habitat along Perennial Streams thereby enhancing connectivity to Mature Forest Habitat elsewhere on the Protected Property.

The map of Perennial Streams found in the Baseline Documentation Report will be used to identify the Perennial Streams that fall under the requirements of this section, subject to a total buffer area acreage cap of 6,898 acres. This acreage cap represents the maximum acreage subject to riparian buffer management across the Protected Property. This cap was derived from the spatial analysis conducted during plan development. The purpose of the cap was to provide management certainty recognizing that the Baseline Documentation would not be complete until after FMP development and to avoid acreage discrepancies as streams meander over time. The Perennial Stream buffers that make up this cap area are structured into two zones. Those buffer zones along with the estimated acreage distribution of each will be managed as follows:

- **No-Harvest Buffer** (0 - 100 feet above Normal High-Water Line) – Approx. 2,400 acres
- **Mature Forest Buffer** (100 - 330 feet above the Normal High-Water Line) – Approximately 4,500 acres. Harvesting may occur so long as the stand will continue to meet the Mature Forest Habitat threshold after harvest. See CE Section VII.A.6 regarding the establishment of Mature Forest Buffers.

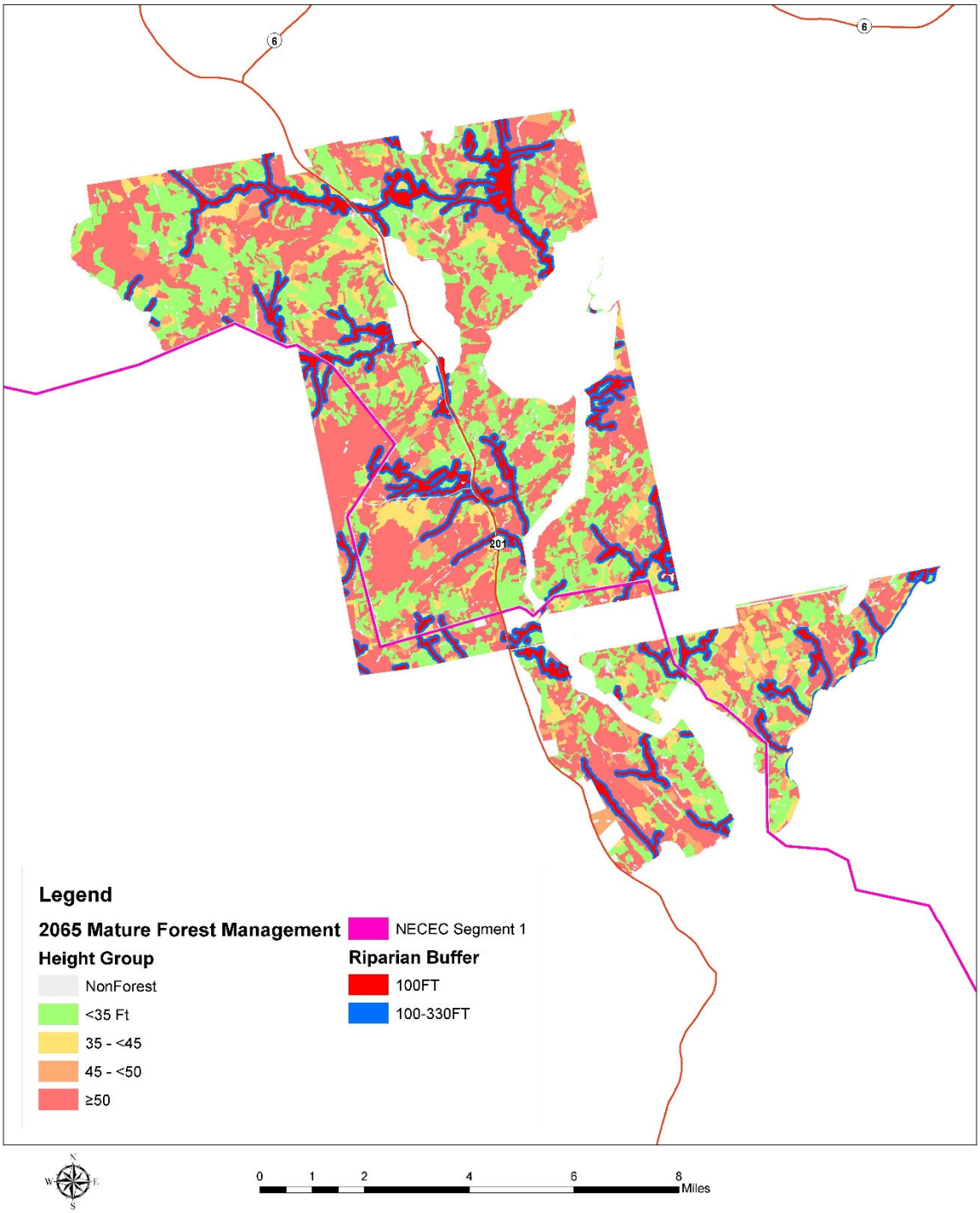
Table 2 below provides a more detailed breakdown of acreage by Covertype within the No-Harvest Buffer, the Mature Forest Buffer and the remaining acreage of the Protected Property.

Table 2. Covertype Acreage within and outside of Buffer Zones

Productive	CoverType		100-330FT	100FT	Grand Total
No	NP - Gravel Pit	39	17	1	57
	NP - Large Streams			56	56
	NP - Ledge	15			15
	NP - Open Water, Reservoirs, L	20		52	72
	NP - Swamps, Marshes, Bays	240	12	905	1,157
	NP - Utility ROWs	1			1
	NP - Yards (Internal Woodyards)	827	100	21	948
No Total		**1,142**	**128**	**1,036**	**2,306**
Yes	Aspen	176	21	5	202
	Conifer - Hardwood	7,591	1,090	617	9,298
	Hardwood	7,053	479	233	7,766
	Hardwood - Conifer	8,756	816	453	10,025
	Hardwood Plantation	16			16
	Larch Plantation	221	5	1	227
	Northern Hardwoods	414	2	1	417
	Pine Plantation	1,093	34	6	1,133
	Softwood	13,284	1,871	1,037	16,191
	Spruce Plantation	2,291	126	27	2,444
	Swamp Conifer - not Pine	5	11	9	26
	Tamarack Plantation	10			10
Yes Total		**40,911**	**4,454**	**2,389**	**47,754**
Grand Total		**42,052**	**4,583**	**3,425**	**50,060**

A map of the approximate location of riparian corridors, with forest management overlay, is included below as **Figure 7**.

Figure 7. Approximate location of riparian corridors, with forest height overlay.



Harvesting will not be conducted within the No-Harvest Buffer except as approved for forest health reasons, as addressed in the conservation easement in Section VII.A.6. Land Use in Accordance with a Forest Management Plan, Best Management Practices and Applicable Laws and

Regulations. Harvesting activities can occur in stands within the Mature Forest Habitat Buffers, subject to the conditions set forth in Section 4.4.

Harvesting equipment crossings of any Perennial Streams will be prohibited except for the construction of a road or skid trail needed to facilitate Forest Management Activities. In these instances, crossings and trails will be minimized and, except during frozen conditions, will utilize panel and/or other crossing structures that span from bank to bank to protect streambank and stream bed integrity.

4.4 Allowances/Exemptions/Approvals

This section covers activities that are exempted from the restrictions of this FMP either automatically or with approval from the Holder. In the event approval is required, Weyerhaeuser will provide written notice to the Holder. The Holder will have 30 days to review and respond. In the event of a denial by the Holder to move forward with such activities, the response from the Holder should include an explanation of the deficiency. In the event a written response is not received within 30 days, Weyerhaeuser is authorized to move forward as planned. See Section XII. F. Standard for Holder Granting Discretionary Consent and Providing Prior Written Approval in the Conservation Easement.

4.4.1 Mature Forest Buffer Harvest

Harvesting may occur in stands located within the Mature Forest Buffer as follows: If a stand has met the Mature Forest Habitat threshold, harvesting may occur without prior approval only if the stand will continue to meet the Mature Forest Habitat threshold after harvest. See CE Section VII.A.6 regarding the establishment of Mature Forest Buffers.

Pre-Salvage in No-Harvest Buffers

Other than in the context of crossings described in Section 4.4.4, harvesting within No-Harvest Buffers may only be conducted under specific forest health scenarios, including pre-salvage operations in response to spruce budworm infestation, and requires the following:

- Written approval from the Holder.
- Justification based on forest health risk, such as imminent mortality in balsam fir stands.

This provision is designed to allow targeted intervention where forest health threats may compromise long-term habitat objectives, while maintaining oversight and alignment with conservation goals.

Pre-Salvage Spruce Budworm Risk Analysis Within No-Harvest Buffers

The table below shows the mature spruce/fir softwood stands currently contained within the "No-Harvest Buffers". These stands may be vulnerable to spruce budworm where pre-salvage may need to be considered.

Table 3. Mature Spruce-Fir Softwood Stands within No-Harvest Buffers

CoverType	StandClassCode	100FT NoHarvest
Softwood	FS2B	11
	FS2C	20
	FS2D	2
	FS3A	22
	FS3B	36
	FS3D	6
	FS4D	4
	S1B	0
	S1C	20
	S1D	12
	S1E	2
	S2A	1
	S2B	235
	S2C	88
	S2D	7
	S3A	229
	S3B	125
	S3C	45
	S3D	37
	S3E	1
	S4A	126
	S4C	7
Softwood Total		**1,037**

Accounting for Pre-Salvage and Mature Forest Targets

All harvesting activities, including pre-salvage, are tracked through the Forest Management System (FMS) and incorporated into annual inventory updates. Specifically:

- Harvested stands are reclassified based on post-harvest conditions.
- Mature forest percentages are recalculated annually using updated stand-level data.

- If pre-salvage activities result in a reduction of mature forest acreage, compensatory adjustments (e.g., deferred harvests elsewhere) may be implemented to maintain progress toward the 2065 milestone of 50% mature forest coverage.

4.4.2 Forest Health

Upon written approval from the Holder, harvesting may be conducted within No-Harvest Buffers following the process described in 4.4.1, above. Section 4.4.3 below addresses responding to large-scale forest health threats and impacts.

4.4.3 Disaster / Force Majeure Event

Section VII.A.6 of the Conservation Easement states the following:

> Grantor and the Holder agree that in the event that a hurricane, fire, flood, drought, disease, or forest health pest outbreak causes or substantially contributes to the failure of Grantor to meet the Milestones or Mature Forest Goal ("Force Majeure Event"), then Grantor shall not be found in non-compliance with this Conservation Easement. Following such an event, the Grantor and Holder shall work cooperatively to revise the Forest Management Plan in furtherance of the Conservation Values of this Conservation Easement, which may include deferring further harvests until the Mature Forest Goals are met. Any further harvesting shall require prior written approval of the Holder and give priority to restoring progress towards the Milestones and the Mature Forest Goal.

Section VII.E.1(a) of the Conservation Easement states the following:

> Waiver in Specific Circumstances. Grantor and the Holder agree that in the event of a hurricane, fire, flood, drought, or similar event or if an insect, disease, or forest health pest outbreak occurs and sanitation or salvage harvests are necessary to prevent the outbreak from spreading to adjacent stands then the restrictions in this Section VII.E.1 may be temporarily waived with the prior written approval of the Holder.

If a Force Majeure Event has occurred, Weyerhaeuser will evaluate the need for revisions to the FMP, in cooperation with the Holder, and evaluate deferrals of further harvests until the Mature Forest Goals are met. See CE Section VII.A.6. Any incidence of a Force Majeure Event, including its impacts, scope, and potential long-term management, harvesting, reforestation, and other implications, will be discussed at the upcoming annual meeting.

4.4.4 Other Exceptions

Maintenance and use of established bridges, trails, truck roads, skid trails, landings, and other stream-adjacent infrastructure identified in the Baseline Documentation Report or otherwise

constructed in accordance with the Conservation Easement shall be exempt from the Perennial Stream Buffer requirements. Skid trails within the 100 ft. buffer are also exempt in order to facilitate Forest Management Activities provided no reasonable access alternative and provided all applicable BMPs are met. See Section 5.6 for further details regarding road, landings and skid trail maintenance and appropriate references to relevant CE Sections and Baseline Documentation. Maps in **Appendix F** show existing forest management roads and landings on the Protected Property.

New Perennial Stream crossings for roads can only be constructed if they have been described in the previous year's Annual Report or the Grantor has otherwise provided notification to the Holder and received approval from the Holder. For skid trail crossings of Perennial Streams, all planned locations and actual completed crossings from the previous year will be provided to the Holder at the Annual Meeting as outlined in CE Section VII.A.6. For both road and skid trail crossings, all applicable Best Management Practices, including those set forth in **Appendix G** and CE Section VII.A.6, shall be met. Such BMPs include, among other things, elements designed to protect streambank integrity by first minimizing the number of crossings and then selecting the most appropriate crossing locations. After the location of a crossing is determined, a successful crossing must also put plans in place for protecting streambank integrity, maintaining adequate filter strips, stabilizing exposed soils and utilizing adequate sediment barriers to minimize impact from exposed soils.

The Holder may grant approval for crossings of Perennial Streams to facilitate activities other than Forest Management Activities, such as non-intensive outdoor recreational activities.

5.0 Timber Resource Planning Considerations

5.1 Forest Inventory

Across the entire Protected Property, the forest inventory is comprised of two-stage stand level survey where individual stands are sampled to develop stand level estimates. A detailed description of Forest Inventory Procedure and Design is found in **Appendix H**. These stand level estimates are expanded to unsampled stands through a stratification and two-stage estimate procedure using remote sensed LIDAR and high flight imagery. The un-cruised stands' harvest history, covertype, and silviculture history are used in conjunction with the remote sensed data to assign an inventory to un-cruised stands.

The inventory is stored at the stand level. The stand consists of a homogenous covertype, stand class, land use, vegetative class, silviculture history, harvest history, and/or site class. Inventory is

adjusted for completed harvest in the Weyerhaeuser Forest Management System (FMS) within 30 days of the completed activity. Final harvests are totally depleted and assigned a reforestation activity. Partial harvest stands are assigned a modeled harvest inventory until the next inventory cycle.

The stand level inventory consists of tree lists with species, product, diameter breast height (dbh) class, basal area, merch height, total height, and trees per acre detail. Each stand will have the gross, productive, and harvestable acres assigned to the stand. Productive acres are determined based on the definition of "Productive Forest Acres" in the Conservation Easement, i.e., any area capable of growing a crop of trees that can reach Mature Forest conditions. See CE Section III.X. Productive areas exclude non-forested acres, such as roads, that intersect the stand. Harvestable acres are a subset of productive acres—they only include the productive acres that can be modeled for harvest, i.e., by excluding any restricted acres for special sites, steep slopes, and/or protected species.

The inventory cycle ensures that cruised stand estimates will be no older than 15 years. This will ensure that any variance in growth and yield estimates that vary from observed estimates are corrected through time. All partially harvested stands will have new sampled estimates assigned prior to any harvest scheduling and/or 10-year FMP update.

The current forest inventory projections are based on a combination of previously sampled stand-level data collected and remote sensing analysis, including 2016 LIDAR canopy height models and NAIP imagery. These inputs were used to stratify and expand estimates across unsampled stands using a two-stage estimation procedure as previously described.

The most recent full inventory effort was conducted in 2019. The current projections reflect updates derived from that dataset, adjusted for harvest activity, growth, post-harvest strata estimates, and young stand strata estimates.

As noted in Section 4.2, a comprehensive remeasurement of the Protected Property will occur by the end of 2026. This effort will focus on updating the entire inventory of the protected property through cruising individual stands in a strata. These individual stand level estimates will be expanded to uncruised stands with the assigned strata based on LIDAR height statistics, past history, and species detail cruising individual stands in a strata. These individual stand-level estimates will be expanded to uncruised stands with the assigned strata based on LIDAR height statistics, past history, and species detail.

The reinventory will follow field sampling procedures as described in **Appendix H**.

5.2 Inventory Classification System

Each stand has a covertype and stand class assigned to describe the current management, species composition, and the size density class. These classifications are derived from silviculture and harvest history, stand visits/exams, and the inventory.

5.2.1 Covertypes

The covertype of each stand identifies the association of tree species for productive stand types and the vegetative type or land use for nonproductive types. Stands with a "plantation" designation identify types that were artificially regenerated via intentional planting methods. See CE Section III.V. The table (**Table 4**) and map (**Figure 8**) below show the covertype acreage.

Table 4. Covertype Acreage

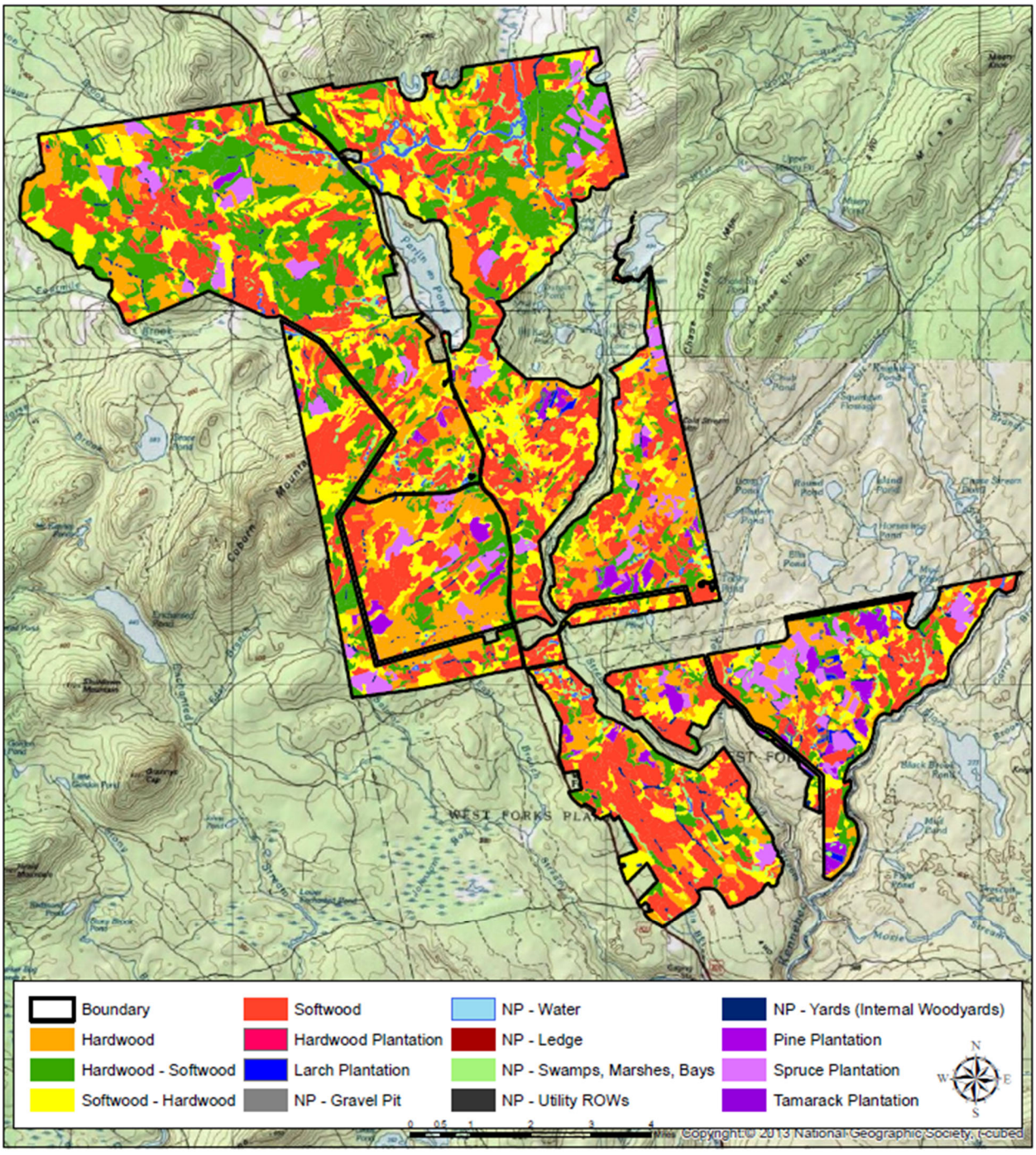
Productive	CoverType	Gross Acres *	Productive Acres **
Yes	Aspen	202	196
	Conifer - Hardwood	9,298	9,102
	Hardwood	7,766	7,558
	Hardwood - Conifer	10,025	9,794
	Hardwood Plantation	16	15
	Larch Plantation	227	221
	Northern Hardwoods	417	403
	Pine Plantation	1,133	1,120
	Softwood	16,191	15,952
	Spruce Plantation	2,444	2,410
	Swamp Conifer - not Pine	26	26
	Tamarack Plantation	10	10
Yes Total		**47,754**	**46,806**
No	NP - Gravel Pit	57	0
	NP - Large Streams	56	0
	NP - Ledge	15	0
	NP - Open Water, Reservoirs, L	72	0
	NP - Swamps, Marshes, Bays	1,157	0
	NP - Utility ROWs	1	0
	NP - Yards (Internal Woodyards) ***	948	0
No Total		**2,306**	**0**
Grand Total		**50,060**	**46,806**

* Gross Acres = GIS Acres

** Productive Acres = Gross Acres net of any nonforest inclusions on road ROWs

*** NP - Yards (Internal Woodyards) = log landings used for harvest operations

Figure 8 - Covertype Map



5.2.2 Stand Class

Each productive stand has an assigned stand class that further defines the standing inventory based on the size, density, and species composition. The size class (numeric code) of the stand defines the development class or product class within the stand. The density class (alpha code) defines the stocking within the stand, by trees per acre for younger stands and basal area in older stands. The species code further refines the species within the stand. The tables below define the classification system. For example: A Northern Hardwood H4A is a Northern Hardwood sawtimber stand of high density.

Table 5. Stand Class Description

Covertype	Stand Class Spp	Description
Aspen	I	Aspen, Balm
Hardwood	I	Birch
	H	Mixed Hdwd
Northern Hardwoods	H	Northern Hardwood (Yellow Birch, Sugar Maple)
Pine	JP	Natural Jack Pine
	RP	Natural Red Pine
	WP	Natural White Pine
Pine Plantation	JP	Plantation Jack Pine
	RP	Plantation Red Pine
	WP	Plantation White Pine
Swamp Conifer - not Pine	S	Lowland Mixed Softwood
	T	Tamarack
	C	Northern White Cedar
	BS	Black Spruce
	Hem	Hemlock
Softwood	S	Upland Mixed Softwood
	FS	Fir Spruce PCT (PCT or release)
	Hem	Upland Hemlock
Hardwood - Conifer	HS	Mixedwood Hardwood Dominated
Conifer - Hardwood	SH	Mixedwood Softwood Dominated
Hardwood Plantation	I	Hybrid Aspen
Spruce Plantation	BS	Black Spruce Plantation
	NS	Norway Spruce Plantation
	RS	Red Spruce Plantation
	WS	White Spruce Plantation
Larch Plantation	L	Larch Plantation
Tamarack Plantation	T	Tamarack Plantation

Density Code	1 & 2 Size (TPA)	3 & 4 Size (Merch Basal Area)
A	>3,000 (>1000 Plnt)	>120 SqFt
B	>1500 (>700 Plnt)	>90 SqFt
C	>700 (>400 Plnt)	>60 SqFt
D	>400 (>250 Plnt)	>30 SqFt
E	NA	>10 SqFt

Size Code	Size Description	Based On TPA & BA
1	Seedlings	< 67% of stems have a dbh >.5" (default < 15 years of age)
2	Saplings	>67% of stems have a dbh >.5" & <67% of BA Merch
3	Pulpwood	>67% of BA Merch
4	Sawtimber	>9.0" Merch QMD or Sawtimber >67% Basal Area Softwood Covertypes or>33% Basal Area All Other

5.2.3 Size Class

Size Class is a numeric code used to define the development stage or product class of a forest stand. Size class reflects the dominant tree size within a stand, typically based upon dbh and height metrics. It helps to categorize stands into growth stages such as seedling, sapling, pole timber or sawtimber based upon tree size.

When considering Size Class as it relates to Mature Forest designation, generally Size Classes 3 and 4 are considered, however not entirely. For example, Size Class 4 generally represents stands that meet the mature forest definition. However, not all stands in Size Class 4 automatically qualify as mature forests. For example, stands in Size Class 4 that have lower stocking densities—such as those classified in stocking class E—do not meet the mature forest threshold for basal area and are therefore not counted toward mature forest milestones. Only those Size Class 4 stands that meet both the height and stocking requirements are included in mature forest calculations.

Similarly, most stands contained within Size Class 3 currently do not meet the mature forest definition. However, some stands contained within the upper end of this size class, such as those classified as 3A, may meet mature forest definitions.

5.3 Mature Forest, Growth & Yield, Future Planning

Mature Forest:

At a minimum, Commercial Forest Management Activities must result in 50% of the Productive Forest Acres with a basal area of 80 square feet per acre of live trees at least 4.5 inches diameter breast height, of which 60 square feet per acre must be at least 50 feet tall, accompanied by representative levels of well distributed standing dead and downed trees where present prior to management activity no later than December 31, 2065, and thereafter in perpetuity (the “Mature Forest Goal”).

The current mature forest percentage on the Protected Property is derived from existing stand level and two stage estimates as described above in ongoing inventory maintenance and growth. These estimates were derived from stands sampled and classified by LIDAR canopy height models. All in-progress and prescribed 2025 harvests have been accounted for.

The current mature forest percentage is a sum of all stands’ productive acres that meet the mature forest definition divided by the total productive acres in the Protected Property. Only trees equal to or greater than 50’ tall can contribute to the basal area required to meet the mature definition. The stand must have at least 60 square feet of basal area of 50 foot tall or taller trees for its productive acres to qualify as mature. The mature forest percentages will be updated each year based on the most current inventory.

Growth & Yield:

Annual growth is performed by using the Northeast Variant of the Forest Vegetation Simulator (NE FVS) growth model provided by the United States Forest Service Department of Agriculture. The NE FVS is calibrated for local conditions using Weyerhaeuser's proprietary methodology. These calibrations are derived from analysis with local Forest Inventory and Analysis (FIA) plot data.

Annual growth is performed at the stand level derived from periodic point in time sampling procedures. If stands have been partially harvested since the last point in time inventory, the inventory data used in growth are from forester thinning model estimates.

Each stand uses tree lists derived from the point in time inventories or thinning model estimates and are grown forward for the appropriate number of years since the inventory took place.

To clarify the specific modeling inputs:

Measured Height Data: Measured tree height data was not used directly in the calibration of the NE FVS model. Instead, subsampled total heights collected during field sampling are used to develop regression models at the stand species and dbh class level. These regressions are then applied to estimate total tree heights across the landscape.

Site Quality Assumptions and Soils Data: Site quality was derived from the NRCS soils series data mapped to the Briggs estimated SI50 site class for natural unmanaged spruce fir. This was done through Plum Creek's Soils Management Group mapping procedure. Further refinements were made for stands with chemical treatments and plantations with well-known ages and heights.

Forest Health and Climate Uncertainty: The current modeling framework does not explicitly incorporate uncertainty related to forest health threats (e.g., insect/disease outbreaks) or climate change impacts as these factors are not embedded within accepted models, including the NE FVS, at this time. The upper limit of density related mortality in FVS was changed from 85 percent to 75 percent to better represent an empirical endemic condition as proposed by Vandendriesche, Don. 2010[3]. This change was made to better reflect endemic conditions encountered in a forest landscape rather than theoretical optimal condition. Adaptive management strategies will be considered as part of future updates to the FMP and annual progress reporting. The modeling does account for natural mortality that occurs through stem exclusion of forest stand development.

[3] Vandendriesche, Don. 2010. FVS out of the box - assembly required. In: Jain, Theresa B.; Graham, Russell T.; Sandquist, Jonathan. Integrated management of carbon sequestration and biomass utilization opportunities in a changing climate: Proceedings of the 2009 National Silviculture Workshop; 2009 June 15-18; Boise, ID. Proceedings RMRS-P-61. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 289-306.

Future Planning:

As noted previously, progress toward the Mature Forest Goal will be made at the following "Milestone" rates:

Mature Forest Milestones	
2025	13%
2035	20%
2045	30%
2055	40%
2065	50%

The rate or percentage of mature forest is calculated by dividing the productive stand acres that meet the mature forest definition by total productive stand acres within the Protected Property. However, although existing Plantations may count toward the Mature Forest Goal, any new Plantations created after the date of this FMP may not. See CE Section VII.E.1. Accordingly, when any new Plantations grow into mature forest, they will be excluded from calculations of productive stand acres meeting the mature forest definition.

Progress toward reaching the Milestones and Mature Forest Goal will be provided to Grantor in annual progress reports. Each year the inventory will be grown forward in time and all harvest will be depleted from the inventory prior to the annual progress report.

The inventory procedure above provides the framework to annually track the Mature Forest Milestones at each annual progress report. Each stand's covertype, stand class, productive acres, and mature forest basal area (trees >50 ft tall) will be provided in the annual progress report. This annual reporting will guide future harvest planning to meet the Mature Forest Milestones at each 10-year FMP update. See CE Section VII.6(a), (d).

Regular harvest scheduling will be conducted at a minimum of every 10 years to project harvest levels. The harvest schedule will be a guide to ensure Mature Forest Milestones are met and not to be used as an absolute annually, to ensure there is flexibility for weather, forest product markets, logger capacity, and other harvest related considerations. The Woodstock Optimization Studio, a Remsoft product, will be used to conduct the harvest scheduling procedures. Woodstock is a purpose-built and highly adaptable optimization model for end-to-end forestry planning and scheduling activities.

5.4 Silvicultural Considerations

Silviculture prescriptions selected at the stand level across the Protected Property will be the responsibility of Maine licensed professional foresters and are subject to the unique characteristics of each stand and unforeseen future conditions. In general, management within the Protected Property will be primarily even-aged regimes outside mature riparian corridors, other state mandated riparian areas, and other special designated areas. Management in all areas of the Protected Property will ensure that the Mature Forest Milestones are met.

Rotation lengths will be dictated by site index, covertype, markets, and the Mature Forest Milestones. Harvest schedules will be run periodically to ensure the footprint is meeting the mature forest milestones and other requirements for the Protected Property.

Even-aged thinning regimes will be implemented in plantation covertypes and natural softwood covertypes to develop product classes of higher and better value where the individual stand dynamics warrant. Stands that are thinned may only be counted toward the Mature Forest Milestones if the residual stand post-thinning continues to meet or exceed the mature forest description.

Within the Mature Forest Habitat Buffers, other state mandated riparian areas, and other special designated areas, a select harvest regime will be implemented. Tree removal will consider tree species longevity, wildlife value, and Mature Forest Milestones. These select harvest regimes will ensure the residual stand condition either meets the mature forest designation at time of harvest or does not impair the stand from meeting the mature forest requirements.

Planting can be implemented within the guides of not exceeding the max plantations allowed by the CE for the Protected Property.

Mixed-Wood Stand Characterization (Beech and Balsam Fir Components)

As noted in Section 3.1, mixed-wood stands comprise approximately 40% of the forested acreage on the Protected Property. These stands are composed of a combination of coniferous and deciduous species, with balsam fir and American beech representing material components within their respective strata. The table below shows the actual components of beech and fir.

Table 6. American Beech and Balsam Fir Tons per Mixedwood Stands

		Total Tons			
CoverType	Species	Outside Riparian Zones	100-330FT Riparian	100FT NoHarvest	Grand Total
Conifer - Hardwood	Balsam Fir	62,778	9,146	6,751	78,675
	Beech	2,605	433	291	3,329
	Other Species	165,387	30,260	24,518	220,165
Conifer - Hardwood Total		**230,770**	**39,838**	**31,560**	**302,169**
Hardwood - Conifer	Balsam Fir	33,008	3,448	2,530	38,985
	Beech	16,323	1,803	1,267	19,393
	Other Species	188,343	23,078	18,942	230,363
Hardwood - Conifer Total		**237,673**	**28,330**	**22,739**	**288,742**
Grand Total		**468,443**	**68,168**	**54,300**	**590,911**

Balsam Fir Component

As shown in the Table above, Balsam fir is a dominant softwood species within many mixed-wood stands and is susceptible to spruce budworm. The Forest Health section (3.2) outlines that balsam fir is actively monitored and managed under the statewide Spruce Budworm mitigation strategy, which includes L2 larval surveys, hotspot identification, and risk-based silvicultural planning.

Beech Component

American beech is also present in the hardwood fraction of mixed-wood stands and is increasingly impacted by Beech Leaf Disease (BLD), which has been confirmed in southern Somerset County. While no detections have yet occurred on the Protected Property, it is expected within the next few years. Beech is generally retained where healthy, but its long-term viability is being evaluated due to disease pressure. Future silvicultural prescriptions may shift toward promoting more resilient hardwood species in affected areas as the science on BLD management improves in the future.

Overall Stand Quality

Currently, overall stand quality across the Protected Property is assessed as good to very good, with many younger stands exhibiting strong vigor and healthy development. Stand health and structural conditions will continue to be monitored through routine field assessments and inventory updates. As conditions evolve, management strategies will be adjusted in coordination with the Holder to ensure continued progress toward the Mature Forest milestones required under the Conservation Easement.

Pre-Harvest Planning and Prescription Identification

Pre-harvest planning is a critical step to ensure that harvest activities align with both regulatory requirements and long-term conservation goals. The process includes:

- **Stand Assessment:** Each stand is evaluated using up-to-date inventory data, including basal area, species composition, and size class distribution. This assessment identifies stands for candidates for Overstory Removal (OSR), Clearcut (CC), or thinning treatments.
- **Prescription Development:** The Silvi-Key flowchart, referenced below, is used to help determine the appropriate harvest prescription. For example, stands exceeding 450 TPA (trees per acre) of quality regeneration may be scheduled for OSR. Stands not meeting these thresholds may be deferred for future treatment.
- **Silviculture Key:** The Silviculture Key is a proprietary tool developed using the latest science available for the Acadian Forests of the Northeast. This tool provides structured guidance for developing harvest prescriptions and planning silvicultural treatments across different stand types. The key is used in conjunction with shifting mosaic management strategies and ensures that, by 2065, at least 50% of productive acres meet and maintain the mature forest conditions as required by the Conservation Easement.
- **Regulatory Compliance:** All harvest plans are developed or reviewed by a licensed forester, and clearcut prescriptions over 75 acres require submission to the Maine Forest Service for approval. Regeneration requirements and separation zones are strictly observed.

B-line Thinning and Residual Stand Status

B-line thinning is utilized as an intermediate silvicultural treatment in stands that do not meet the criteria for overstory removal or clearcutting. The objective of B-line thinning is to improve stand structure and promote further development of quality regeneration and residual crop trees while maintaining or progressing toward the mature forest conditions required by the Conservation Easement.

A residual stand following B-line thinning will only be classified as “mature forest” if it meets the following criteria:

- **Basal Area:** At least 60 square feet per acre of live trees that are 50 feet or taller and at least 80 square feet per acre total of live stems greater than 4.5 inches dbh (for productive acres).

If, after thinning, the residual stand does not meet these thresholds, it does not qualify as mature forest. This approach ensures that all silvicultural thinnings are aligned with the long-term goal of

achieving and maintaining mature forest conditions across at least 50% of productive acres by 2065, as stipulated in the Conservation Easement.

Quality Regeneration and Overstory Removal

Overstory removal is only prescribed when there is sufficient quality regeneration established in the understory. The standard for "quality regeneration" is defined as:

- **>450 trees per acre (TPA)** of vigorous, desirable species (including maple, birch, oak, ash, aspen, spruce, and fir).

Prior to overstory removal, stands are assessed to confirm that this regeneration threshold is met. If the threshold is not achieved, the stand is either deferred for further development or managed with additional treatments to encourage regeneration.

Clearcut Regeneration Standards

Clearcutting is subject to strict regeneration requirements:

- **Regeneration Monitoring:** All clearcut areas must be regenerated to a new stand of trees that meets specific density and height requirements within five years, in accordance with the Maine Forest Practices Act.
- **Intervention Measures:** If natural regeneration is insufficient, site preparation (including herbicide application or planting) may be employed on a case-by-case basis to ensure successful establishment of the next forest cohort.
- **Documentation and Reporting:** Foresters monitor and document regeneration progress, and interventions are planned if stocking or species composition is inadequate. Results are shared with the Holder and relevant agencies during annual meetings.

Harvest Plan Elements

The following is an example of a harvest plan, illustrating the standard elements and considerations included in operational planning for timber harvests conducted on the Protected Property. The example is intended to demonstrate how site-specific information, silvicultural objectives, environmental safeguards, and operational details are integrated to ensure compliance with regulatory requirements and best management practices. Those elements are as follows:

Township: [Insert Township Name]

Notification Number: [Insert FON]

Forester: [Insert Forester Name & License]

Logging Contractor: [Insert Contractor Name]

Harvest Prescription Determined by Silviculture Key: [e.g., Clear Cut with Residuals, Selection Harvest, Patch Cut]

Silviculture Key:

The Silviculture Key is a tool developed using the latest science available for the Acadian Forests of the Northeast. This tool provides structured guidance for developing harvest prescriptions and planning silvicultural treatments across different stand types. The key is used in conjunction with shifting mosaic management strategies and ensures that, by 2065, at least 50% of productive acres meet and maintain the mature forest conditions as required by the Conservation Easement.

Logging Method: [e.g., Mechanized – Tree Length, Hand Crew, Processor/Forwarder]

Estimated Acres: [Insert Number of Acres]

Soils: [e.g., Well Drained, Poorly Drained]

Slope Class: [e.g., Gentle Slope (0–8%), Steep (16–35%)]

Operability: [e.g., Summer, Winter, All Season]

Roads: [e.g., Flagged, Permit Approved]

Property Boundary: [e.g., NA, Blazed & Flagged]

Silviculture Objective: [e.g., Natural Softwood Regeneration]

Harvest Type: [e.g., Clear Cut, Thinning, Overstory Removal]

Supervision: [Insert Supervisor Name]

Environmental and Safety Considerations:

- Implement all BMPs (see BMP manual)
- Retain scattered dead & live trees within block
- Protect unique habitats and water quality as identified
- Pre-site safety assessment completed

5.5 Best Management Practices

All Forest Management Activities on the Protected Property are performed in accordance with scientifically developed Best Management Practices that protect water quality by minimizing soil erosion. All Forest Management Activities occurring on the Protected Property will be supervised by a Maine licensed professional forester.

Applicable Best Management Practices and Statewide Standards for Timber Harvesting and Related Activities in Shoreland Zones are attached hereto as **Appendices G and I**, respectively. These BMPs, as may be updated, revised, or replaced over time, will be followed under this FMP.

Such Best Management Practices will be supplemented by the requirements of this FMP to achieve and retain Mature Forest Habitat and Perennial Stream Buffers as outlined in Section VII.A.6 of the CE.

5.6 Road Maintenance and Construction

Grantor reserves the right to construct, install, maintain, and relocate land management roads, including culverts, bridges, other similar drainage and support structures and erosion control devices, winter haul roads, gates, skid trails and skid roads, timber landing areas, and equipment and vehicle parking areas, associated with Grantor's reserved rights, including to support Forest Management Activities and Non-Intensive Outdoor Recreation on the Protected Property; provided that any such roads, parking areas, and water crossings shall abide by applicable local, state, and federal laws and regulations. The establishment of any new land management roads or the relocation of existing land management roads requires prior written approval from Holder.

Grantor reserves the right to maintain and use all pre-existing roads and landings contained within the Perennial Stream Buffer for future Forest Management Activities as reviewed and documented in the Baseline Documentation Report. Existing roads or landings contained within the Perennial Stream Buffers cannot be expanded unless prior written approval is obtained from the Holder.

Construction or relocation of new roads requires prior approval from Holder, including as may be addressed in a previous Annual Meeting, provided that winter haul roads only require prior approval by Holder if they cross Perennial Streams. See CE Section VII C.4; CE Section VII D.2; CE Section VII.A.6. Routine maintenance, repair, and replacement of roads or bridges does not require notice or approval by Holder.

Regardless of whether notice and/or approval by Holder is required, all road maintenance and construction activities will adhere to Best Management Practices that protect water quality by minimizing soil erosion and will be supervised by a licensed professional forester. These BMPs, as may updated, revised, or replaced over time, will be followed under this FMP.

5.7 Access

Motorized Public Access On and Across the Property:

The Protected Property contains 39.8 miles of permanent road access through and across the Protected Property on 18 rights of way to ensure access to the Cold Stream Forest detailed in **Appendix J**. In addition, State Route 201, also known as Old Canada National Scenic Byway, travels north and south through the center of the Protected Property. No changes to existing motorized access are required under the Conservation Easement or addressed in this FMP.

Non-Motorized Public Access On and Across the Protected Property.

The Conservation Easement grants the public with non-motorized access on and across the Protected Property for Non-Intensive Outdoor Recreation and prohibits Grantor from discouraging such access. See CE Section VII.F. However, Grantor retains the right to establish reasonable rules and regulations governing such non-motorized access, such as regulating noise, fires, camping, etc. Examples of such presumptively reasonable rules and regulations are set out in Section VII.F.3 of the Conservation Easement. Moreover, Grantor retains the right to temporarily restrict public access by closing access points, trails, or roads as necessary for safety, ecological, or other specified reasons. See CE Section VII.F.3. Before such restrictions are imposed, consideration must be made regarding the nature of the access being restricted, and the duration and reason for the restriction. Based on the above considerations, prompt written notice to Holder may be required. See CE Section VII.F.3.

Existing recreational trails, such as ATV, hiking, and snowmobile trails, are set out in the Baseline Documentation. The Conservation Easement allows but does not require Grantor to either establish and maintain, or allow others to establish and maintain, these or any additional unpaved trails, provided that any new trail work is done with Holder's approval and in accordance with BMPs.

6.0 Non-Timber Resource Planning Considerations

This section describes the non-timber resource planning considerations, including those set out in Section VII.A.6(b) of the Conservation Easement, after consultation with the Maine Department Inland Fisheries and Wildlife (MDIFW) and the Maine Natural Areas Program (MNAP).

6.1 IF&W and MNAP Stakeholder Consultation

As required in Section VII.A.6(b)(iii), (v) of the Conservation Easement, the Grantor and Holder held a Stakeholder Consultation Meeting on March 1, 2025 with MDIFW and MNAP personnel in order to identify the Confirmed or Potential Endangered, Threatened and Special Concern Species as well as any Rare Plant Populations or Rare or Exemplary Natural Communities found on the Protected Property as of the date of this FMP. In addition, information regarding Essential Habitat, Significant Wildlife Habitat and Aquatic Resources was provided. The Grantor recognizes the importance of considering these species, populations and communities and of working to ensure the habitats that they rely on are maintained or enhanced and that forest management activities do not adversely impact these important ecologies.

6.2 Rare, Threatened, Endangered Plant & Animal Species of Special Concern

All Forest Management Activities will be conducted in a manner that is consistent with the following guidelines, standards and practices. Following is a description of the known or likely presence of state and/or federal threatened or endangered plant and animal species, and rare and exemplary natural communities, developed in Consultation with IF&W and MNAP agencies and personnel. Maps are produced from data layers provided by Inland Fisheries and Wildlife as well as Maine Natural Areas Program.

6.2.1 Confirmed Endangered, Threatened and Special Concern Species

The following Endangered, Threatened and Special Concern Species and exemplary natural communities have been documented on the Protected Property.

Bicknell's Thrush (State Threatened)

1. **Introduction**

Bicknell's Thrush is a rare and range-restricted migratory songbird that breeds in high-elevation coniferous forests in the northeastern United States and eastern Canada. In Maine, its breeding habitat is primarily found in subalpine fir-dominated forests and occurs locally along the Coburn Mountain Range. Habitat is usually dominated by balsam fir (>30%) where a history of disturbance has resulted in stunted dense understory, usually at elevations >2,500 feet. A map of the habitat with confirmed observations of Bicknell's Thrush on the Protected Property is shown in **Figure 9** below. Special management guidelines should be implemented in these areas, as follows:

2. **Habitat Description**

Preferred Breeding Habitat:

- Elevation: Typically >2,500 feet on suitable north-facing slopes.
- Forest Type: Dense, stunted balsam fir and red spruce forests, with dense understory.
- Stand Structure: Multi-aged, regenerating stands with high stem density of trees 6 to 26 feet tall with diameters of ≥4 inches dbh. These characteristics would be found in S1, S2, SH1 & SH2 stands withing the Protected Area.
- Canopy: Partially open to closed, with abundant cover and horizontal structure.
- Key Features: Moist soils, mossy ground cover, minimal human disturbance.

3. **Management Objectives**

- Maintain and enhance suitable breeding habitat for Bicknell's Thrush.
- Minimize fragmentation and edge effects in high-elevation forests.
- Coordinate silvicultural practices with breeding season to reduce disturbance.
- Promote natural regeneration of balsam fir and spruce species.
- Retain native fruit bearing shrubs and trees, such as Mountain Ash.

4. **Management Guidelines**

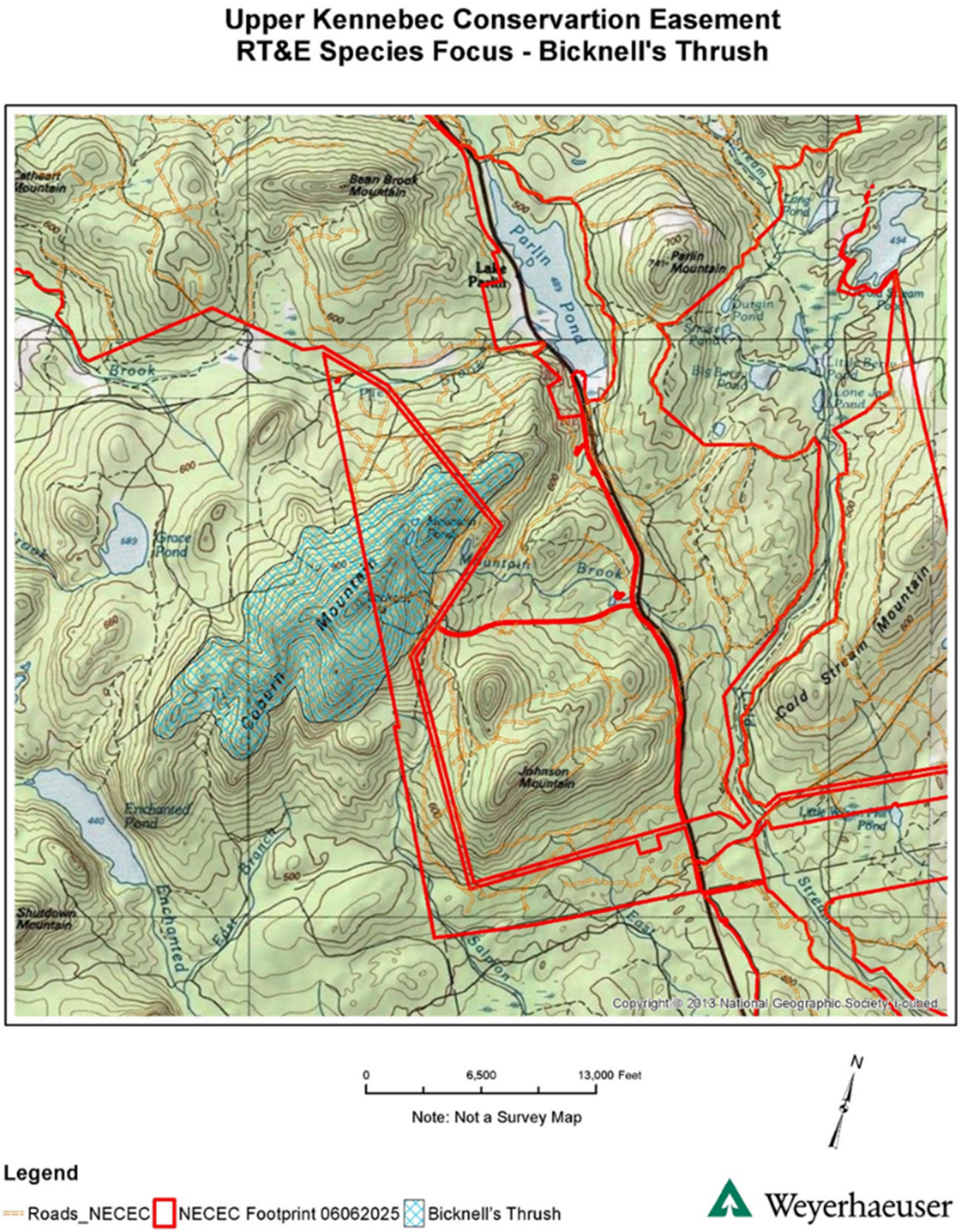
4.1. Silvicultural Practices

- Retain patches of dense regeneration within managed areas.

4.2. Seasonal Timing Restrictions

- Avoid mechanical operations (e.g., harvesting, road construction) in mapped area shown in Figure 9 within stands that meet breeding habitat definition (see Stand Structure above) during the nesting season: May 1 – July 31.

Figure 9. Map of Documented Occurrence of Bicknell's Thrush on Protected Property.



Rusty Blackbird (State Special Concern)

1. **Introduction**

The Rusty Blackbird is a medium-sized songbird associated with boreal wetlands, forested swamps, and riparian corridors. Most of the wetlands utilized by this species are within the Mature Forest Habitat areas on the Protected Property. Once considered common, its population has declined by over 85% since the mid-20th century. This bird is represented by less than 50 current occurrences throughout the State of Maine and occurs at several locations on the Protected Property, as depicted in **Figure 10**. Special management guidelines should be implemented in these areas, as outlined below.

Maine represents the southern edge of its core breeding range where these birds breed in dense, young or stunted northern softwood and mixedwood forests, especially those with standing water, alder thickets, and sphagnum bogs. Habitat loss, predation, wetland degradation, and climate change are major threats.

Softwood silviculture also creates habitat around wetlands where suitable nesting and foraging habitat does not occur within the wetland by promoting portions of stands with young spruce-fir trees <= 10 feet tall and <= 2 inches in diameter. Promoting stand characteristics like this between wetlands and uplands is beneficial for this species.

Breeding individuals are known to abandon their nests because of predators, primarily red squirrels, or human disturbance. MDIFW recommends at least a 100-foot no cut riparian buffer around wetland complexes known to host Rusty Blackbird populations on the Protected Property. There are four such known complexes, all of which should have a 100-foot no harvest buffer within the Perennial Stream No-Harvest Buffer.

2. **Habitat Description**

Preferred Breeding Habitat:

- Dominated by black spruce, balsam fir, tamarack, and northern white cedar.
- Wetlands such as beaver ponds, flooded swamps, peatlands, and slow-moving streams, and their associated riparian areas.
- Presence of standing deadwood, downed woody debris, and shrubby understory (e.g., alder and willow).
- Low to moderate canopy cover (30–70%) near water sources.

Key Habitat Indicators**:**

- Sphagnum moss and moist, mossy forest floor.
- Proximity to shallow, stagnant or slow-moving water bodies.
- Isolated, low-elevation wetlands or drainages within forests.

3. **Management Objectives**

- Maintain and enhance breeding and foraging habitat for Rusty Blackbird.
- Retain hydrologic function and integrity of forested wetland complexes.
- Coordinate forest management and road building activities to minimize disturbance during the breeding season.

4. **Management Guidelines**

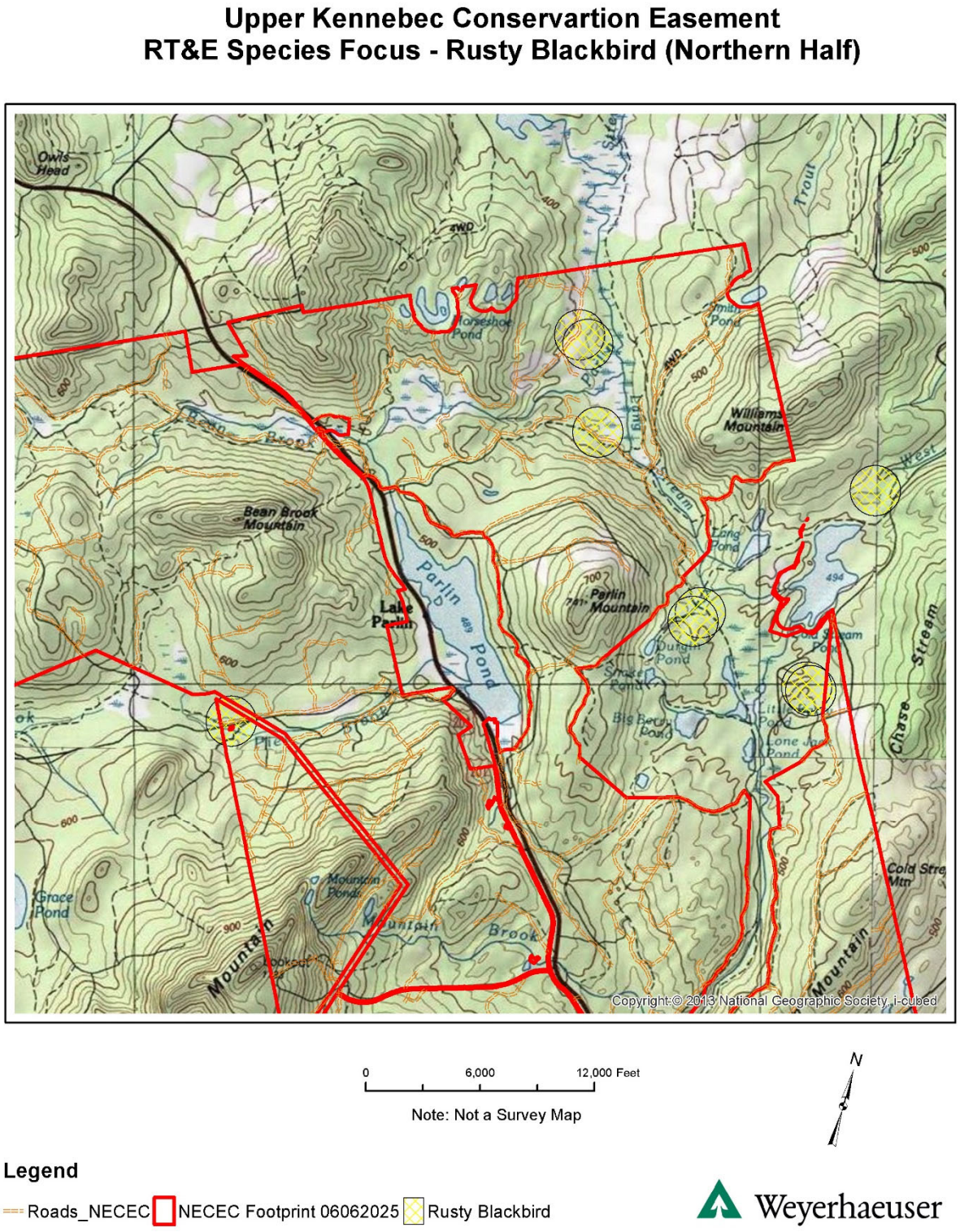
4.1. Silvicultural Practices

- Softwood silviculture can create habitat around wetlands where suitable nesting habitat does not occur.
- When stand is suitable for nesting, leaving scattered trees (snags and live trees) in softwood stands to serve as territorial perch trees.
- Maintain and protect existing wetland and riparian habitats with at least a 100' no-harvest buffer on wetland complexes confirmed, and shown in Figure 10, to host Rusty Blackbird.

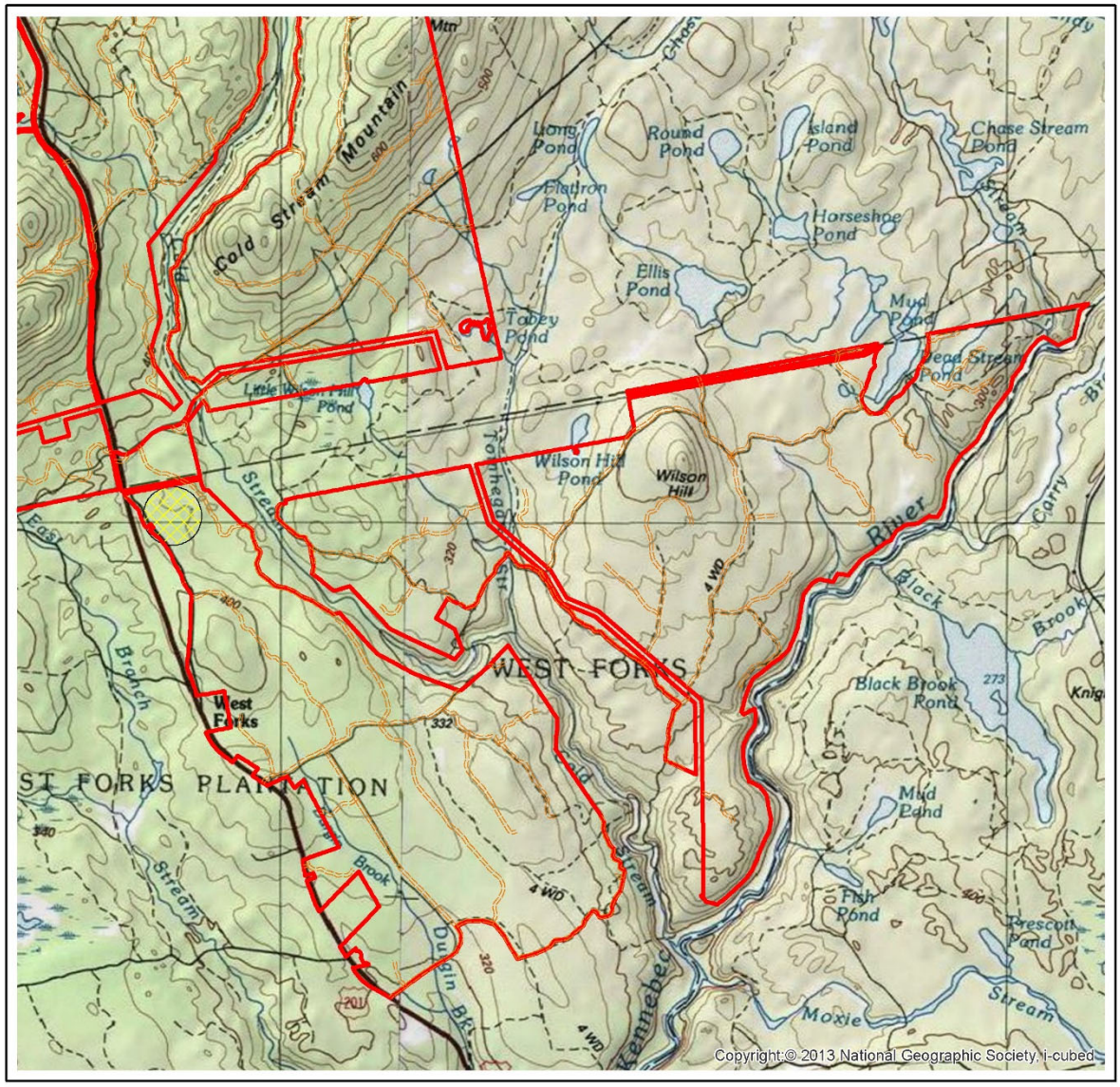
4.2. Seasonal Timing Restrictions

- Minimize disturbance from mechanical operations (e.g., harvesting, road construction) around occupied breeding habitat during the breeding season: May 1 – June 30.

Figure 10. Maps of Documented Occurrence of Rusty Blackbird on Protected Property.



Upper Kennebec Conservartion Easement
RT&E Species Focus - Rusty Blackbird Southern Half)



0 6,000 12,000 Feet

Note: Not a Survey Map

N

Legend

Roads_NECEC NECEC Footprint 06062025 Rusty Blackbird

Weyerhaeuser

Roaring Brook Mayfly (State Threatened)

1. **Introduction**

The Roaring Brook Mayfly is an aquatic insect restricted to cold, high-elevation stream systems in northeastern hardwood-conifer forests. The larval stages are fully aquatic and rely on high water quality, stable streambed substrates, and well-shaded riparian corridors. Population declines may be associated with riparian disturbance particularly causing sedimentation, forest road construction, and increased stream temperatures. It is currently known only at 14 sites in Maine's central and western mountains. Maine occurrences are all above 1200 feet elevation and bordered by intact deciduous or mixed forest. The Roaring Brook Mayfly has one known incidence of occurrence on the Protected Property – See Map in **Figure 11**. Special management guidelines should be implemented in these areas, as follows:

2. **Habitat Description**

The life history of the Roaring Brook Mayfly is poorly known. It likely has a single-year life cycle, with most of the time spent instream as eggs and nymphs, and a brief period spent in the riparian area as adults in late summer and early fall.

- **Stream Conditions**: Cold, oxygen-rich water at high elevations with stable flows and low turbidity.
- **Riparian Vegetation**: Dense hardwood or mixed wood canopy providing >70% shade over stream channel.
- **Substrate**: Clean gravel, cobble, and coarse woody debris for egg attachment and nymphal cover.

3. **Management Objectives**

- Maintain and enhance intact riparian habitat for Roaring Brook Mayfly.
- Protect water quality to ensure:
    - Cold water temperatures
    - Minimized sedimentation and chemical input
- Conserve riparian organic inputs (leaves and woody debris) for stream dwelling nymphs

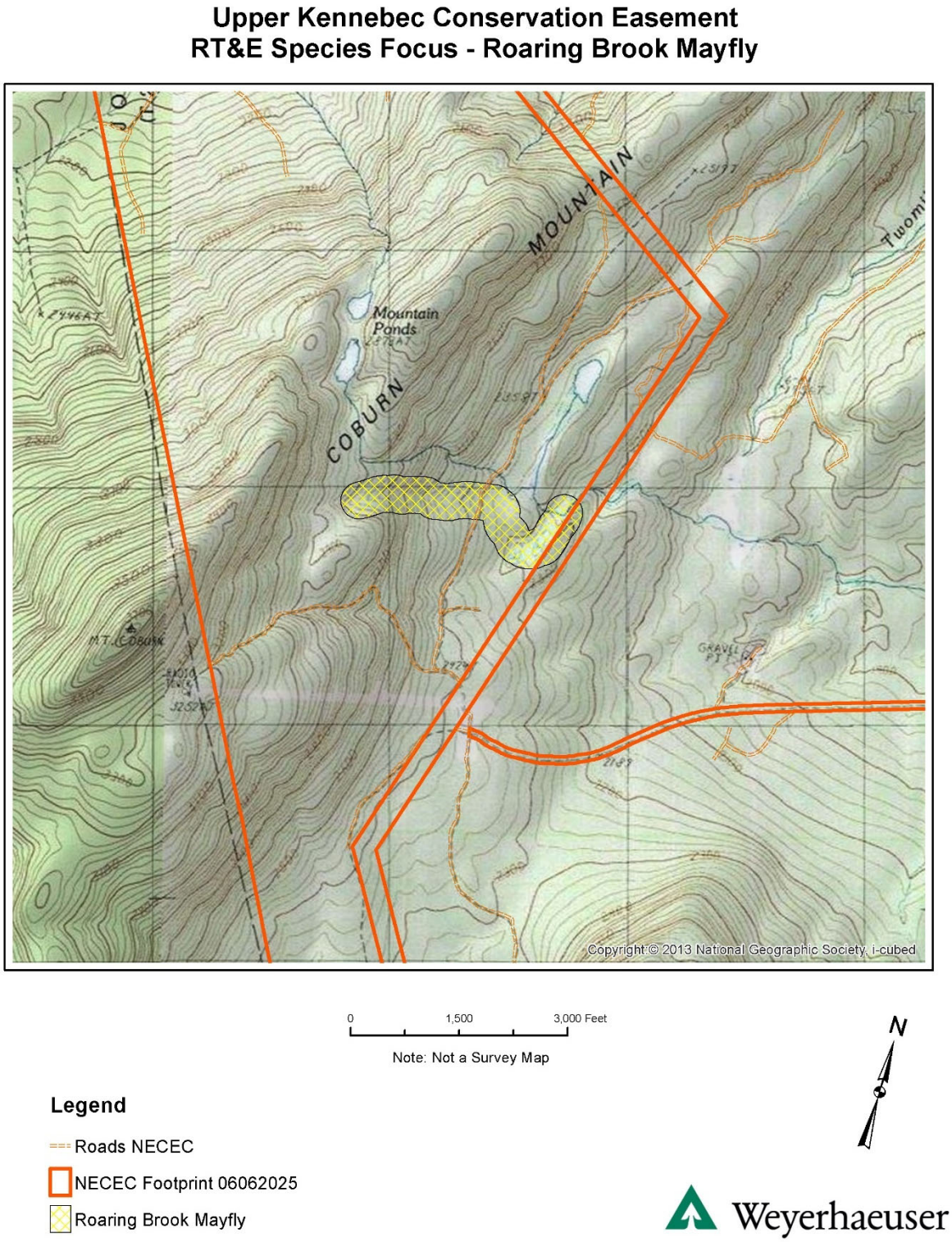
4. **Management Guidelines**

4.1. Silvicultural Practices

- For occupied streams shown in Figure 11, within the first 50 feet on both sides of the stream, establish and maintain a no-harvest buffer.
- Between 50 feet and 250 feet from occupied streams, ensure that a mature forest condition is maintained.
- Harvest only during dry or frozen conditions.
- Minimize construction of roads, log landings or other permanent land use conversions within the 250-foot buffer of occupied streams.
- On slopes facing the stream, maintain an unscarified filter strip of at least the width indicated below between the normal highwater mark of the stream and any exposed mineral soil created by management activities. These recommendations follow minimum performance standards for timber harvest as defined in Maine LUPC Rules and Regulations (Chapter 10.27E).

Average Slope of Land (%)	**Width of Strip** (feet along surface of ground)
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70	165

Figure 11. Map of Documented Occurrence of Roaring Brook Mayfly on Protected Property.



6.3 Rare and Exemplary Botanical Features

Hairy Arnica (State Threatened)

1. **Introduction**

Hairy Arnica (*Arnica lanceolata*) is a State-Threatened (S2, G3) rare plant species in Maine, where it reaches the southeastern edge of its natural range. It is typically found in open, cool, ledgy or gravelly rivershores and cliffs in subalpine environments, where the natural lack of soil and harsh environment restricts competition from other vegetation. Hairy Arnica is sensitive to disturbance and changes in the environment and has been documented in twelve towns from four counties in Maine. One population of this species has been documented on the Protected Property – See Map in **Figure 12.** Management guidelines will be implemented in this area.

2. **Habitat Description**

- Hairy Arnica prefers partial sun to open canopy conditions with well-drained, rocky or sandy acidic soils, typically on ridgelines or south-facing slopes.
- Ledgy or gravelly shores or wet cliffs
- Alpine or Subalpine – non-forested uplands
- Non-tidal Rivershore (non-forested, seasonally wet)

3. **Management Objectives**

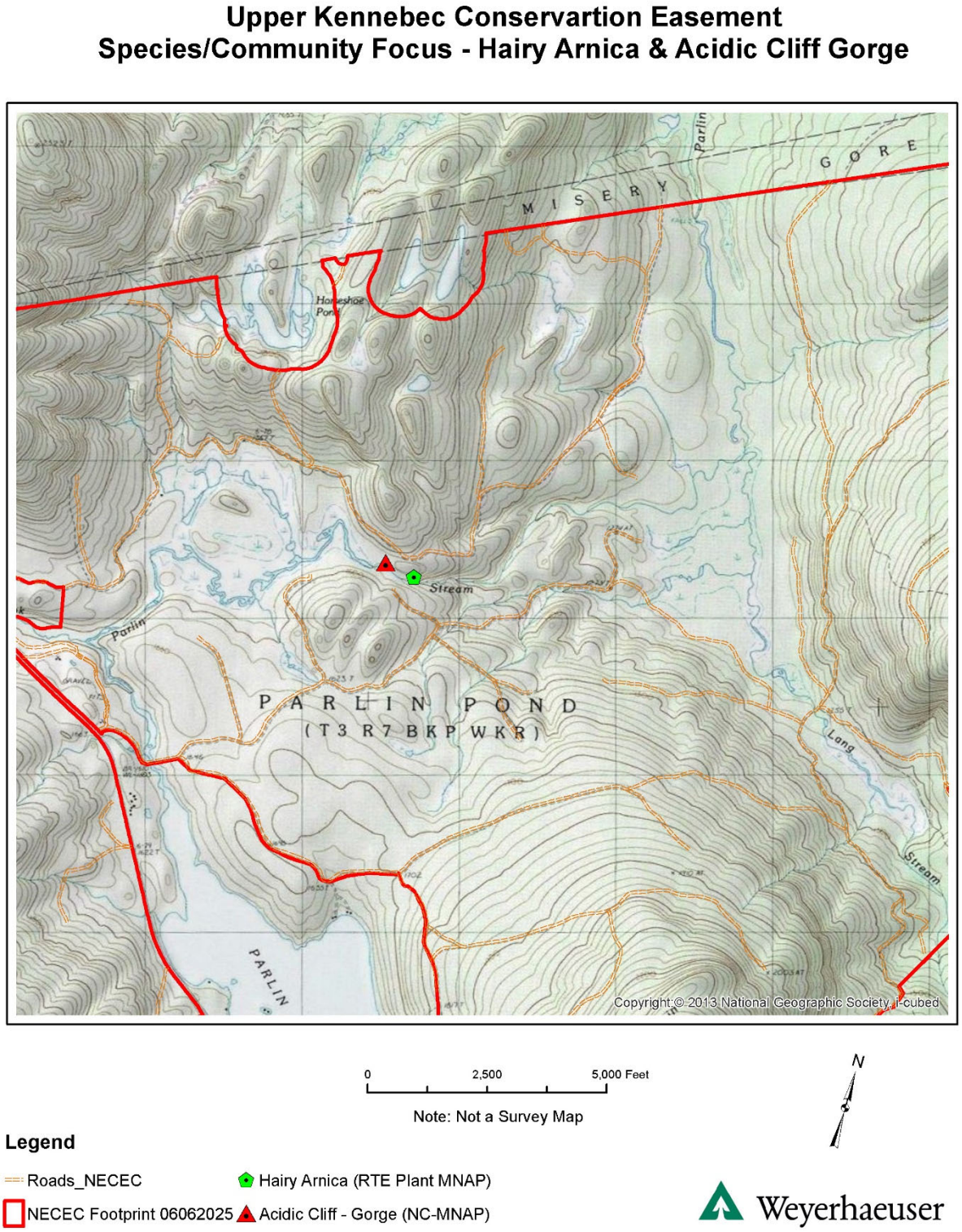
- Maintain and ensure the persistence of the known populations of Hairy Arnica found within the Protected Property.

4. **Management Guidelines**

4.1. Silvicultural Practices

- Provide a 25-foot no-harvest exclusion buffer around mapped sites of Hairy Arnica.
- Forest management activities adjacent to the exclusion buffer will be conducted to prevent impact on Hairy Arnica sites and will minimize soil and root zone disturbance.

Figure 12. Map of Documented Occurrence of Hairy Arnica and Acidic Cliff Gorge on Protected Property.



Acidic Cliff-Gorge (Exemplary Natural Community)

1. **Introduction and Habitat**

An Acidic Cliff-Gorge is a sparsely vegetated, vertical to nearly vertical natural community type that is found infrequently throughout the Maine landscape but more commonly found in the northern portions of the state. The steep outcrops of non-calcareous, erosion-resistant rocks, such as granite or acidic schist are typically dry, with sparce vegetation. However, a moist microclimate may be maintained over local areas by runoff or seeps from higher elevations or, in gorges, by flowing stream water. Acidic Cliff-Gorges may host cliff-nesting bird species such as peregrine falcons or golden eagles and support a unique assemblage of vascular plants and lichens.

2. **Management Objectives**

Given the nature of the habitat and where they are found, these communities are usually inaccessible and therefore likely to be minimally affected by harvest operations. One occurrence of an Acidic Cliff-Gorge natural community has been documented on the Protected Property – See Map in **Figure 12.** Management guidelines will be implemented in this area.

3. **Management Guidelines**

For any mapped and confirmed Acidic Cliff-Gorge occurrences on the Protected Property, no forest management activities will occur within the mapped community without consultation with the Maine Natural Areas Program.

6.4 Fish and Wildlife Habitat

Much of the Protected Property has ecological importance as wildlife and fisheries habitat, and protecting the property through the CE ensures that development will never adversely impact the ecological benefits of such habitats and their resident species. By preventing residential, commercial, industrial and other traditional development, conservation of the Protected Property under the terms of the CE will ensure the perpetual protection and preservation of its conservation values.

6.4.1 Deer Wintering Areas

1. **Introduction**

White-tailed deer are common throughout Maine but in northern portions they rely on Deer Wintering Areas (DWA) to survive winters. DWAs are dominated by softwood to provide thermal cover, decreased snow depth and access to food throughout winter. There is one zoned wintering area on the protected property: P-FW #080412 (89 acres) in Parlin Pond. Through consultation with MDIFW, a Biological Deer Wintering Area (BDWA) is identified in the southern portion of West Forks Plantation. This BDWA supports wintering deer from the Moxie Stream DWA (P-FW #060065) and Cold Stream Forest cooperative yard and is used by wintering deer during times of moderate snow depth and temperature during the yarding season. Weyerhaeuser (formerly Plum Creek) managed the Cold Stream Forest cooperative yard prior to the conservation sale as a 2,168-acre DWA. Refer to Maps in **Figure 13** for location of the Parlin Pond Twp DWA and the West Forks BDWA.

2. **Habitat Description**

From *Guidelines for Wildlife: Managing Deer Wintering Areas in Northern, Western and Eastern Maine:* "Deer wintering areas include a variety of habitat components that may change with forest condition and management strategy. These habitat components contribute to the long-term functioning of a DWA as a source of winter shelter and food."

Primary Winter Shelter

Primary Winter Shelter (PWS) consists of forest stands that provide shelter for deer during the most severe winter conditions. PWS has the following: Softwood crown closure 70% mixed or solitary stands of cedar, hemlock, spruce, and fir; and Stand height 35 feet.

Secondary Winter Shelter

Secondary Winter Shelter (SWS) consists of forest stands that provide adequate shelter for all but the most severe winter conditions. SWS has the following: Softwood crown closure between 50% and 70% mixed or solitary stands of cedar, hemlock, spruce, and fir; and Stand height 35 feet.

Non-Mature/Future Shelter Stands

Stands mapped within a DWA that do not currently meet PWS or SWS definitions provide forage (woody browse) between and adjacent to stands that provide shelter. These stands enhance the value of a DWA, especially when managed to attain PWS or SWS criteria. DWAs often include areas such as south facing slopes that enhance solar gain during late winter. These areas may not meet SWS or PWS criteria but provide microclimatic benefits that contribute to DWA functioning.

Travel Corridors

Successful functioning of DWAs on a long-term basis requires travel corridors within the DWA. Traditionally used corridors often follow streams and wetlands, or topographic features such as ridgelines and valleys. Functional corridors are wide enough to provide deer with sheltered travel ways throughout the yard and are located to maintain direct access to winter shelter.

3. **Management Objectives**

3.1. Parlin Pond P-FW #080412

- Maintain minimum of 50% of stands that are softwood dominant as conforming winter shelter
- Use active forest management and a variety of silvicultural techniques to maintain and improve forest health while promoting desired future habitat conditions.
- Maintain travel corridors connecting the mosaic of habitats for cover and food.

3.2. Biological Deer Wintering Area

- Promote softwood cover in suitable areas to enhance overwintering deer habitat.
- Maintain travel corridors connecting the mosaic of habitats for cover and food.

4. **Management Guidelines**

4.1. Parlin Pond P-FW #080412

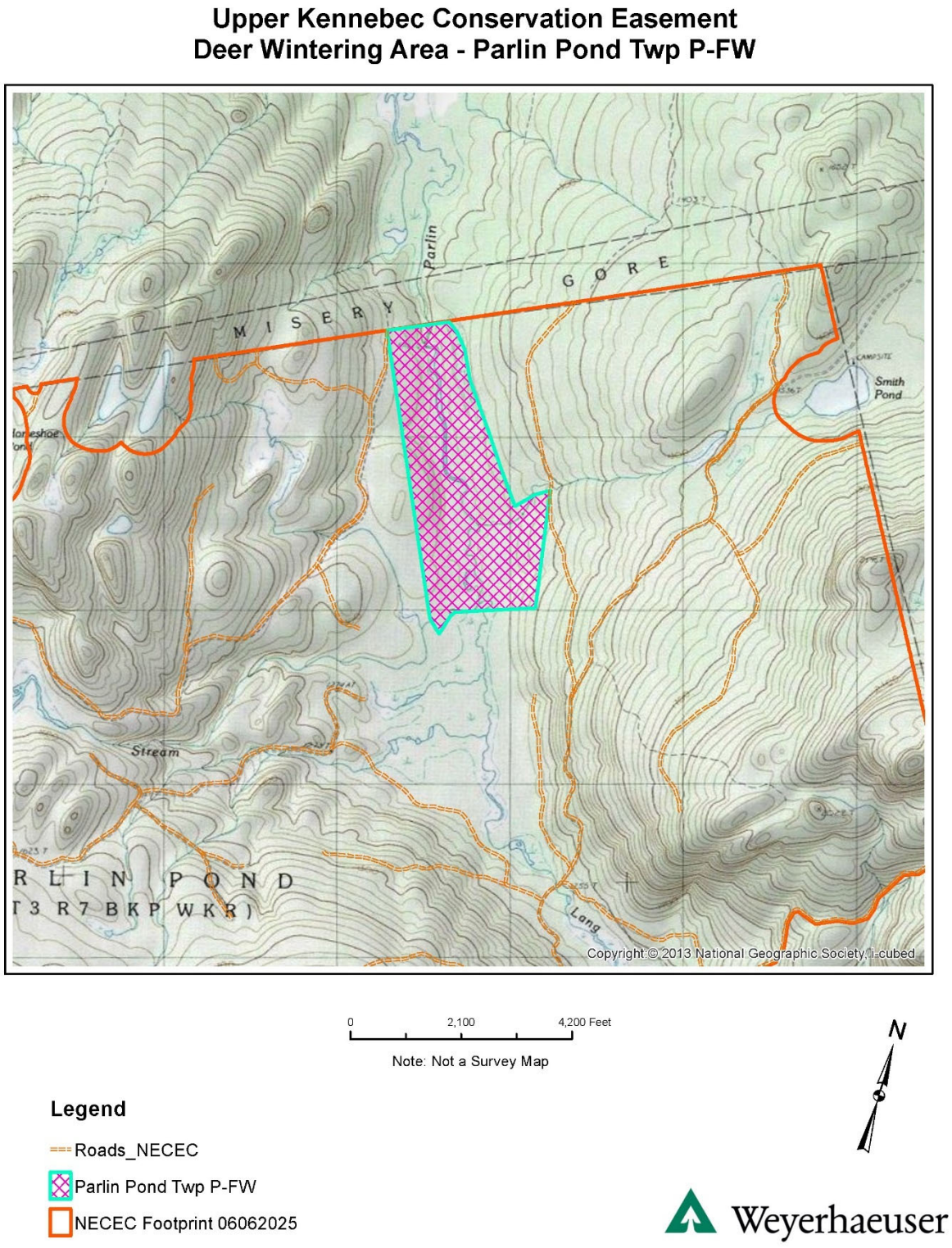
Prior to harvesting or new road construction, consultation with MDIFW regional biologists will take place and a plan will be developed collaboratively to meet the objectives above. Travel corridors

will be maintained through the Riparian Habitat Management Standards in the Conservation Easement (Section VII.A.6).

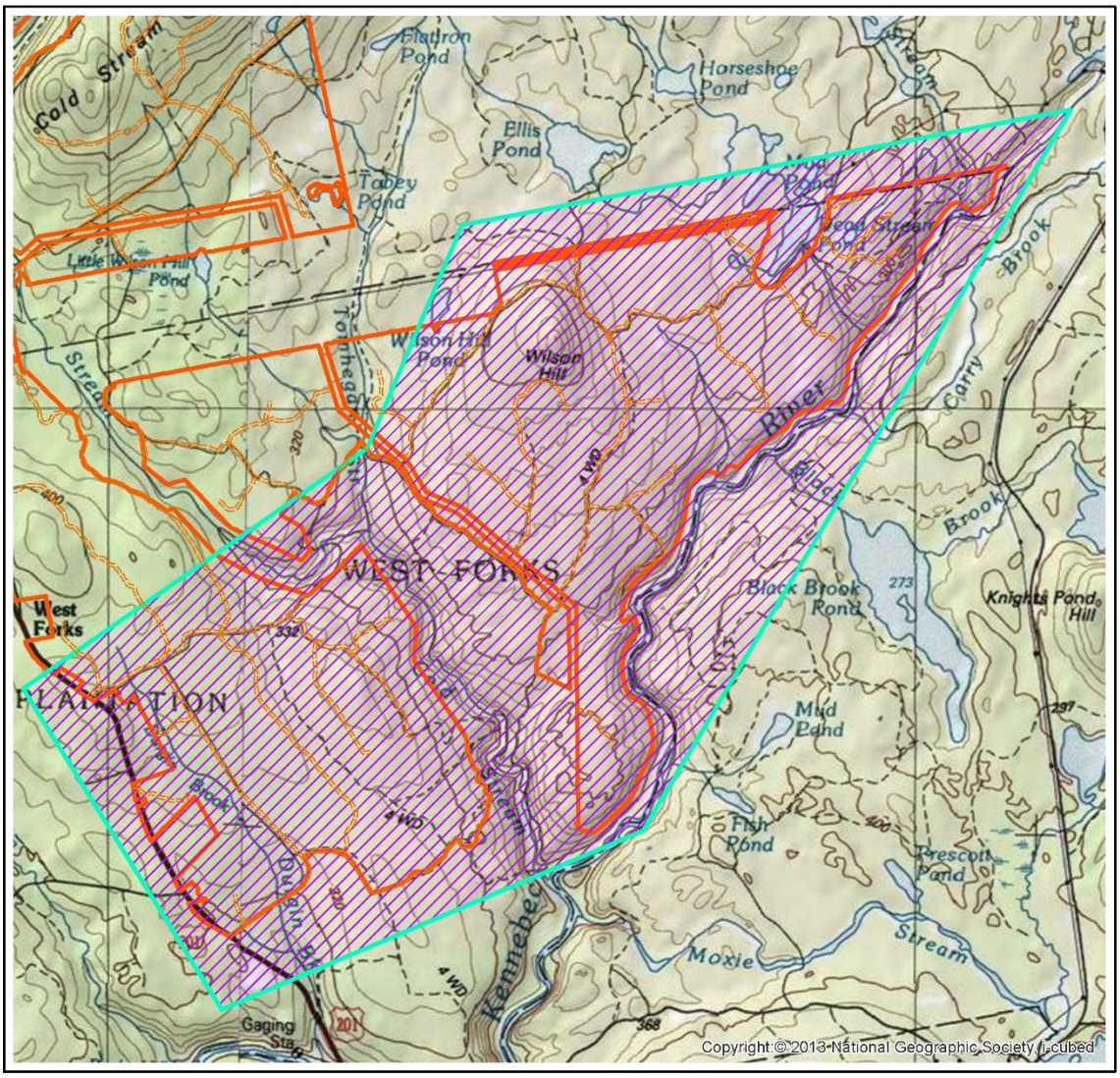
4.2. Biological Deer Wintering Area

The BDWA will be mapped in our system for awareness of supporting the adjacent deer wintering areas. When appropriate, softwood silviculture will be used to promote softwood within that area. Travel corridors connecting the various cover and food sources will be maintained through the Riparian Habitat Management Standards in the Conservation Easement (Section VII.A.6).

Figure 13. Parlin Pond Twp P-FW (#080412) and the West Forks Pla. Biological Deer Wintering Areas



Upper Kennebec Conservation Easement
Biological DWA - West Forks Habitat Mgmt Area



0 5,000 10,000 Feet

Note: Not a Survey Map

N

Legend

- Roads_NECEC
- West Forks Biological DWA
- NECEC Footprint 06062025

Weyerhaeuser

6.4.2 Significant Vernal Pools

1. **Introduction**

Vernal pools are small (usually less than one acre), natural, temporary or seasonally flooded depressions/wetlands that provide breeding habitat for a variety of amphibians and invertebrates, including obligate species such as spotted salamanders, wood frogs and fairy shrimp. In Maine, Significant Vernal Pools (SVPs) and their adjacent terrestrial habitat are designated and mapped by the Maine Department of Environmental Protection (MDEP). There are three documented SVPs and one Potentially Significant Vernal Pool on the Protected Property – See Map in **Figure 14.** Special management guidelines should be implemented in these areas, as well as others identified in the future, as follows:

2. **Management Objectives**

- Protect hydrology and habitat of significant vernal pools (SVPs).
- Maintain a functional forested buffer around pools to support amphibian life cycles.
- Minimize soil disturbance and canopy loss in sensitive areas.
- Ensure compliance with Maine's Forestry Habitat Management Guidelines for Vernal Pool Wildlife (https://www.maine.gov/dacf/mfs/projects/kennebec_woodlands/downloads/documents/vernal_pool_hmg.pdf).

3. **Management Guidelines**

These guidelines shall be applied to Significant Vernal Pools shown in Figure 14. Habitat management shall be based upon the *Forestry Habitat Management Guidelines for Vernal Pool Wildlife* (Calhoun & DeMaynadier 2004) – below is the Summary of Recommended Guidelines.

3.1 Within the Vernal Pool Depression

- Avoid all mechanical activity (e.g., skidding, felling, slash disposal).
- Maintain natural leaf litter and canopy to preserve water quality and amphibian habitat.

3.2 Managed Buffer (0 –100 ft)

- No harvest or partial harvest using low-impact equipment and techniques such as extraction by either boom or cable.
- Stabilize any exposed mineral soil.

- Maintain a minimum average of 75% canopy cover of trees minimum of 20 – 30 ft. tall, uniformly distributed.
- Preserve large, downed woody material and coarse woody debris.
- Schedule harvesting outside the amphibian migration and breeding period during dry or frozen soil conditions (ideally August - March).

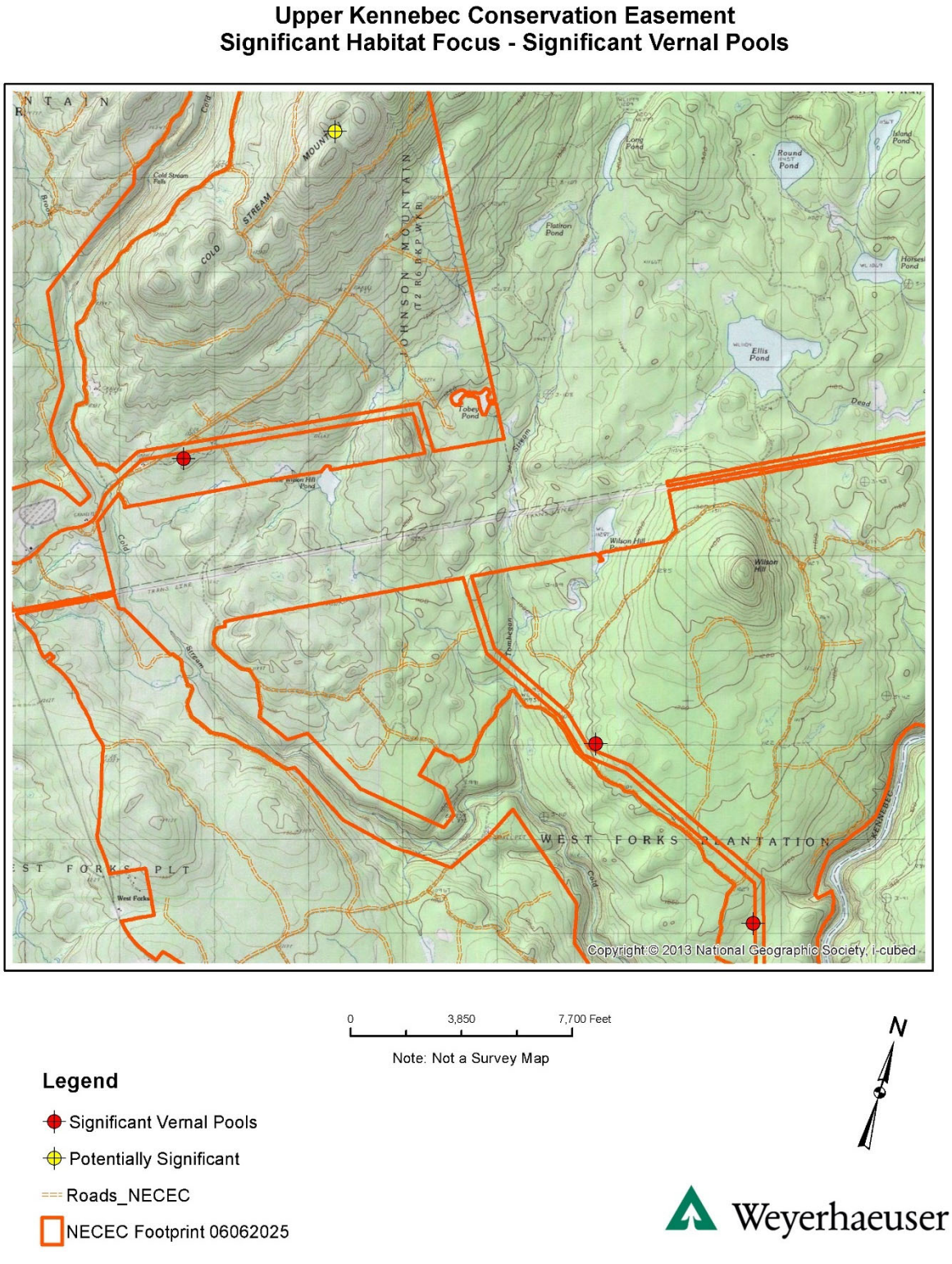
3.3 Amphibian Life Zone (100 – 400 ft)

- Partial harvest retaining at least 50% canopy cover of >20' tall trees
- Preserve as much large, downed woody material and coarse woody debris as possible.
- Schedule harvesting during dry and frozen soil conditions.

3.4 Road Construction and Access

- Avoid new roads and skid trails within 100 feet of an SVP unless no viable alternative exists.
- Road maintenance activities for existing roads can still be conducted even though they may bisect a significant vernal pool buffer.
- Employ erosion control measures (e.g., silt fencing, water bars) to protect water quality.

Figure 14. Significant and Potentially Significant Vernal Pools on the Protected Property



6.4.3 Bat Hibernacula

Four of the eight bat species in Maine are protected by the Maine Endangered Species Act, while the remaining four species are designated species of Special Concern. Endangered species include little brown bat, eastern small-footed bat, tri-colored bat and the northern long-eared bat, which is also federally Endangered. Bat species of Special Concern include big brown bat, red bat, hoary bat and the silver-haired bat.

There has not been a comprehensive statewide inventory for bats in Maine and there are no known occurrences of these bat species on the Protected Property, but it is likely that some of these eight species may be found either during spring and fall migrations or the summer breeding season or both. Further, it is possible that there may be some individuals of these species overwintering on the Protected Property.

There are no known bat hibernacula or maternity roosts on the parcel. If bat hibernacula were either documented using winter acoustic surveys, or observations in caves on the Protected Property were confirmed to be occupied, tree removal would be prohibited within ¼ mile of the hibernacula under MDIFW Chapter 8 Rule of the Maine Endangered Species Act until MDIFW were consulted for management guidelines based on the best available science at the time.

6.4.4 Inland Wading Bird and Waterfowl Habitats

1. **Introduction**

Inland waterfowl and wading bird habitats (IWWH) in Maine - such as freshwater wetlands, marshes, forested swamps, small ponds, beaver flowages, and riparian areas - are critical breeding, nesting, brood-rearing and foraging grounds for waterfowl like geese and ducks and wading birds like herons and bitterns. There are several documented IWWH areas on the Protected Property – refer to Maps in **Figure 15.** Management guidelines will be implemented in these areas.

2. **Habitat Description**

This habitat area includes the wetland area plus a 250-foot-wide zone of upland habitat around the wetland. IWWHs in Maine can be broadly classified into:

- **Forested Wetlands**: Red maple swamps, cedar swamps, or mixed hardwood wetlands.
- **Emergent Wetlands**: Marshes dominated by herbaceous plants.
- **Scrub-Shrub Wetlands**: Early successional habitats, often transitional zones.
- **Beaver Flowages and Vernal Pools**: Temporarily or intermittently flooded habitats.
- **Riparian Zones**: Forested buffers along rivers, streams, and lakes.

3. **Management Objectives**

- To protect ecological values of Inland Waterfowl and Wading Bird Habitat
- Minimize soil disturbance and canopy loss in buffer areas.
- Protect water quality and wetland integrity from management activities.
- Maintain a functional forested buffer around IWWHs to support wildlife ecologies.
- Minimize soil disturbance and canopy loss in sensitive areas.

4. **Management Guidelines**

Most of the mapped Inland Waterfowl and Wading Bird Habitat occurrences on the Protected Property are associated with a Perennial Stream that will be buffered as described in Section 4.3.3. of this Forest Management Plan. Additional Management Guidelines are as follows:

4.1 Protect Core Habitat Areas

- No harvest or ground disturbance within 100 feet of IWWH water resources as currently depicted in Figure 15 except to allow for maintenance or use of currently existing roads and landings.
- Maintain at least a 250-foot undisturbed buffer around active Great Blue Heron nesting colonies during the breeding season (April 15 through July 31st).

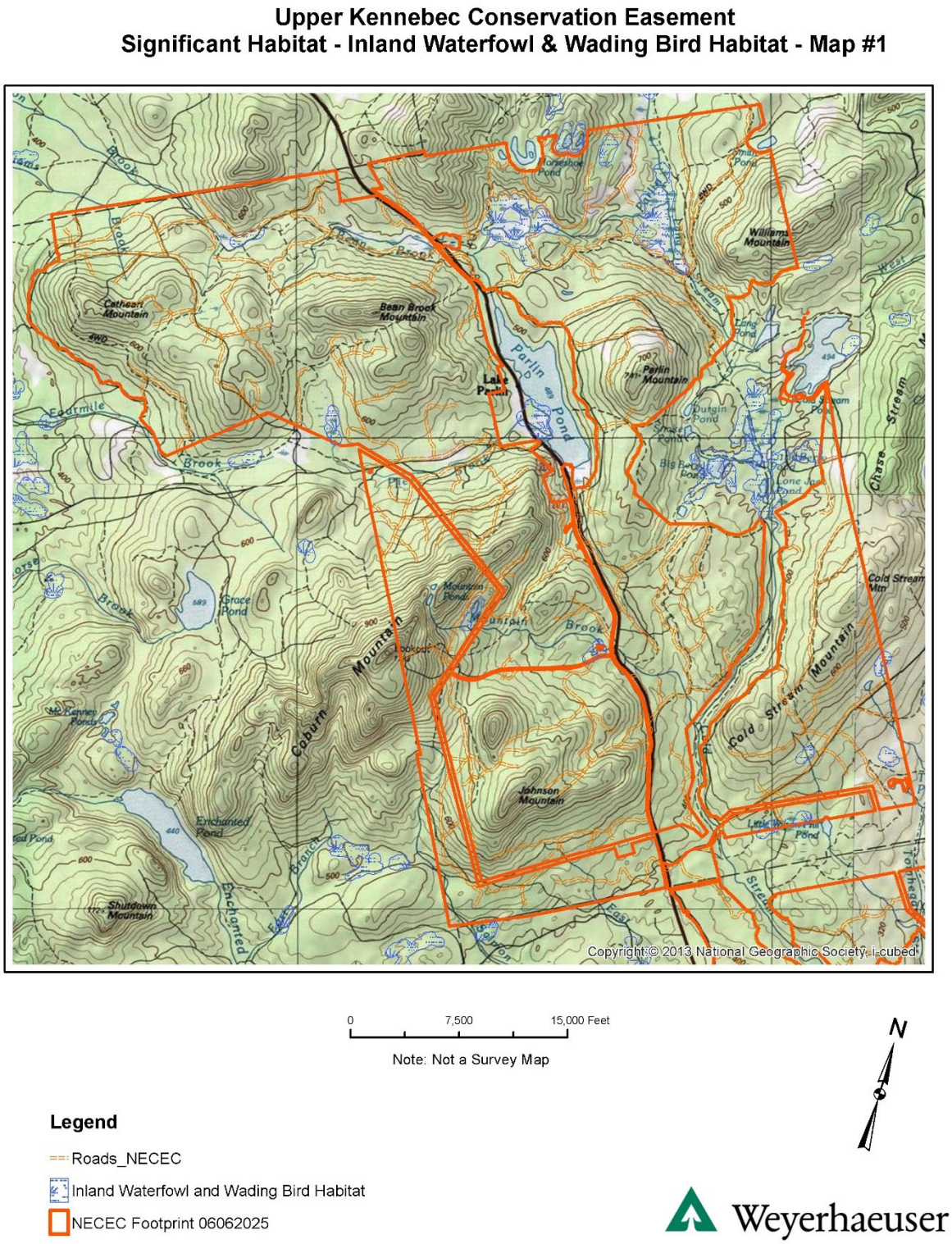
4.2 Buffer Zone Management

- Schedule harvesting during dry or frozen soil conditions and closely adhere to BMPs for water quality and wetland protection.
- Retain or manage a 100 to 250-foot variable edge buffer, depending on slope, soil type, and sensitivity.
- Promote multi-layered vegetation structure with a mix of conifers and hardwoods
- Maintain a well distributed overstory with >50% canopy closure in riparian corridors to preserve shade, temperature regulation, and nesting cover
- Protect downed woody debris and leave snags and live trees with cavities to support cavity nesting waterfowl and other wildlife species.

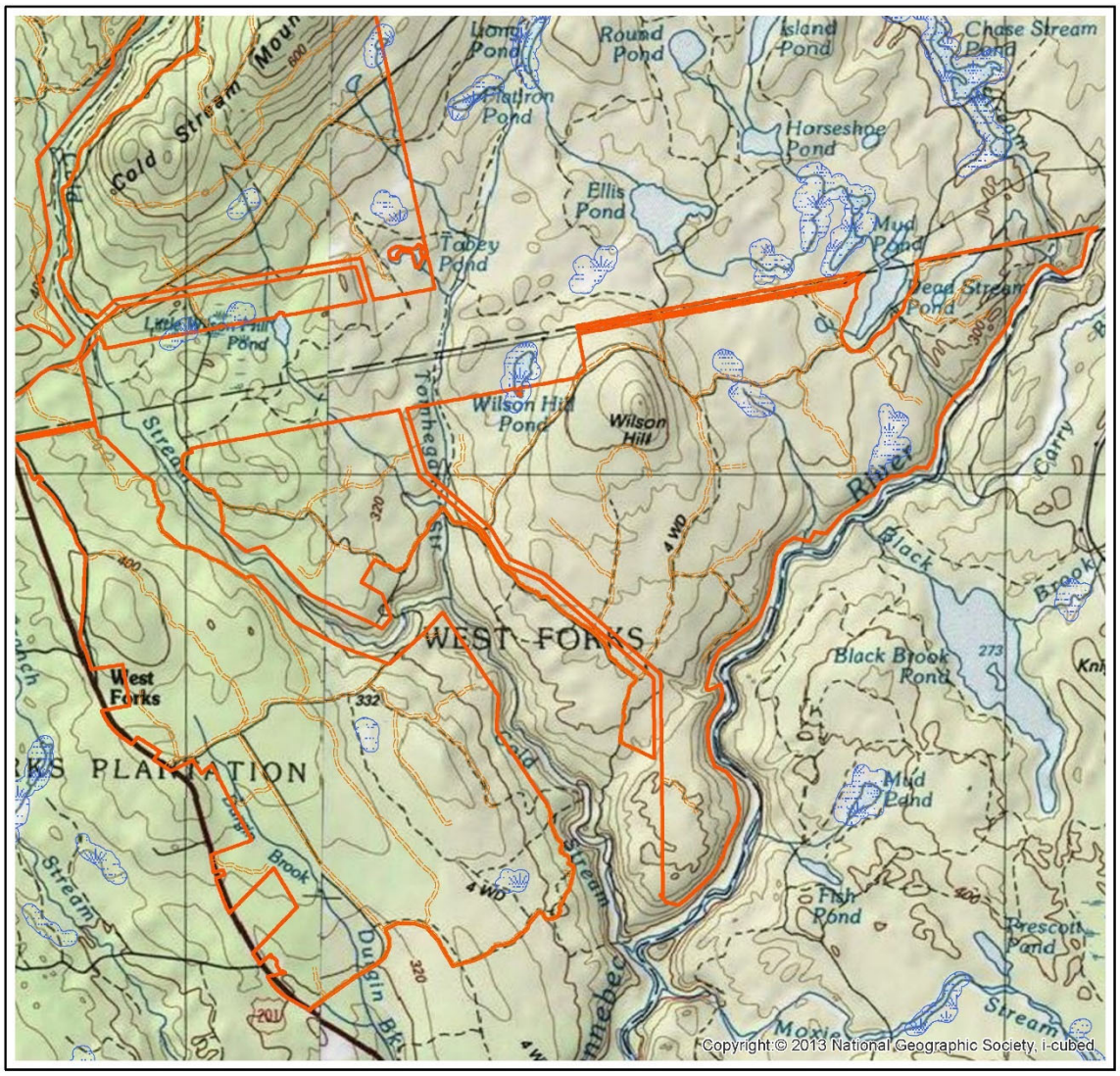
4.3 Seasonal Timing Restrictions

- Avoid harvest or ground disturbance within 100 feet of IWWH core areas identified in Figure 15 during the breeding season (April 15 – July 31). Consultation with MDIFW is required if unavoidable.

Figure 15. Inland Waterfowl & Wading Bird Habitat on the Protected Property



Upper Kennebec Conservation Easement
Significant Habitat - Inland Waterfowl & Wading Bird Habitat - Map #2



0 5,000 10,000 Feet

Note: Not a Survey Map

N

Legend

- Roads_NECEC
- Inland Waterfowl and Wading Bird Habitat
- NECEC Footprint 06062025

Weyerhaeuser

6.4.5 Aquatic Resources

Forest management activities around aquatic resources are governed by a combination of State regulations as required by Land Use Planning Commission (LUPC) and Best Management Practices as well as on the Protected Property by the 100 foot no-cut and 330 foot Mature Forest Buffers around perennial streams as outlined in this plan. In consultation with MDIFW, Aquatic Resources throughout the Protected Property were identified and suggested for further consideration as shown below.

State Heritage Fish Waters

1. **Introduction**

Waterbodies designated as State Heritage Fish Waters are critical lakes and ponds that support self-sustaining, high-quality populations of native wild brook trout. These waters are protected under Maine State law and require special consideration to ensure the long-term health of these sensitive ecosystems.

Brook trout require clean, cold, well-oxygenated water and are extremely sensitive to changes in riparian habitat, water quality and species composition. The following guidelines are designed to maintain or enhance water quality and habitat integrity in and around State Heritage Fish Waters.

There are five documented Heritage Fish Waters ponds totaling 51 acres on the Protected Property as shown in **Figure 16** and listed as follows:

- Markham Pond – 3 acres
- Mountain Pond #2 – 3 acres
- Little Wilson Hill Pond – 13 acres
- Tobey Pond – 11 acres
- Wilson Hill Pond – 21 acres

Brook trout likely continue to thrive in these ponds due to continued cooler water thermal regimes, lack of competing non-native or invasive fishes, and the adaptability/resilience of wild brook trout in the absence of those major stressors. An important note is that past harvesting practices have followed current forest regulations and have therefore protected these ponds allowing them to retain their status as Heritage Fish Waters.

2. **Management Objectives**

- Protect water quality and maximize buffer integrity.
- Maintain a functional, mature forested buffer around lakes and ponds that minimize soil disturbance and canopy loss in sensitive areas.
- To conserve the ecological values associated with these waterbodies.

3. **Management Guidelines**

Protection of Habitat: Forest management practices will minimize threats associated with environmental and land-based activities that pose direct and indirect adverse impacts to heritage fish, their habitat, and their food sources

- Establish a riparian buffer around all Heritage Fish Waters
- The ponds shown in Figure 16 will be buffered as described for Perennial Streams in Section 4.3.3. of this Forest Management Plan.
- For Heritage Fish Waters under 10 acres
    - Retain >60% of the basal area within 150 feet of the water body as mature forest to maintain shade, temperature regulation and nesting cover.
    - Adhere to LUPC Subdistrict rules for P-MA zones as required around Mountain Pond #2
    - Maintain an unharvested buffer zone of 100 feet from the high-water mark
    - Limit operation of heavy machinery within 100 feet of waterbodies except at designated crossings

- For Heritage Fish Waters over 10 acres
    - Retain >60% of the basal area within 250 feet of the water body as mature forest to maintain shade, temperature regulation and nesting cover.
    - Adhere to LUPC Subdistrict rules for P-GP, and P-MA if required.
    - Maintain an unharvested buffer zone of 100 feet from the high-water mark
    - Limit operation of heavy machinery within 100 feet of waterbodies except at designated crossings

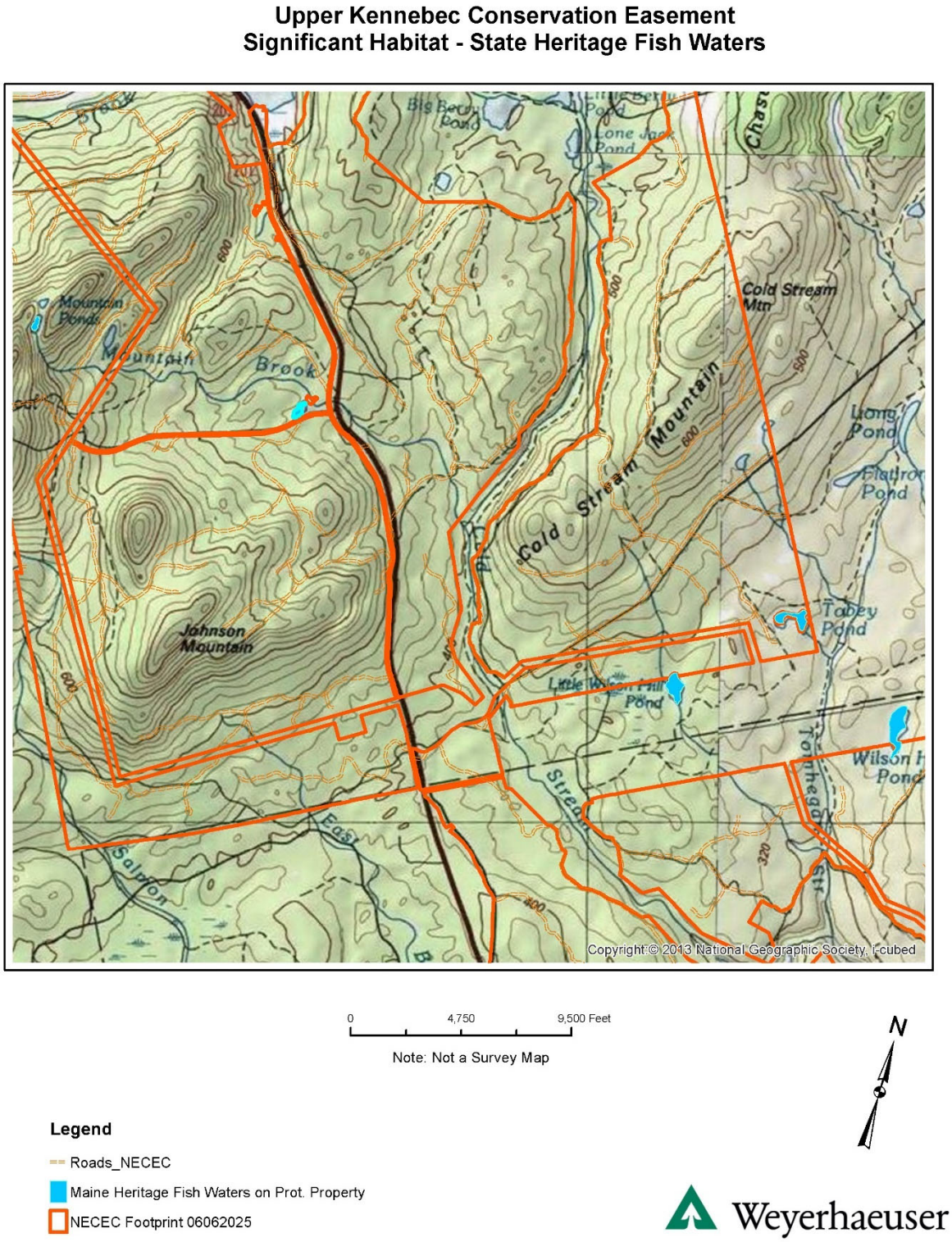
- Avoid new road construction within 250 feet of State Heritage Fish Waters unless no feasible alternative exists.

Protection of Water Quality: Forestry BMPs are crucial for protecting water quality during timber harvests. The intent is to minimize soil erosion and sedimentation, which can harm these sensitive aquatic habitats.

- Schedule forest management activities near these water bodies to take place outside the spring snowmelt and fall spawning periods.
- Conduct harvesting during frozen ground or dry conditions to reduce rutting and sedimentation risks.
- Implement BMPs such as waterbars, ditch turnouts, silt fencing, and regular road maintenance to prevent erosion issues and sediment delivery to streams.

Stream Crossings: Properly sized and installed stream crossings for forest roads and trails are essential for protecting water quality and allowing fish passage to upstream habitats. Adherence to standards and laws for placing wood into stream channels are important for protecting these cold-water fisheries habitats. Use bridges or open-bottom arch culverts where possible for stream crossings. Size crossings to accommodate 100-year flood flows and allow aquatic organism passage where possible.

Figure 16. State Heritage Fish Waters on the Protected Property



Riparian Buffers and Stream Crossings

The Protected Property contains numerous other lakes, ponds and streams that provide suitable habitat for cold water fisheries and other aquatic species. Proper riparian management is important for the protection of water quality and cooler temperatures, along with promoting the accumulation of coarse woody debris; all of which is vital to the many ecologies that require these inputs and conditions. Intact and well managed riparian buffers are also used as travel corridors for a variety of wildlife species. Forested buffers will be maintained along all perennial streams and wetlands to ensure the proper maintenance of these valuable habitats.

All forest management and road construction activities within the Protected Property, including stream crossing installation and maintenance, will utilize current Best Management Practices to avoid erosion, sedimentation, stream flow alterations and other impacts that would have an adverse impact on fish and other aquatic life.

The Protected Property has had active forest management activities conducted many times in the past. Given the terms as mandated by the Conservation Easement, the increased buffers on substantial miles of perennial streams will ensure that the waters on the Protected Property will continue to provide quality habitat for riparian species present today.

6.4.6 Other Species of Special Concern from Consultation with IF&W

MDIFW identified several potential Species of Special Concern that might be present on the parcel but haven't been documented due to limited formal surveys. Many of these species' needs are protected under the CE Riparian Habitat Management Standards or documented Species of Concern. Listed below are the identified potential species and how they will be addressed.

Bats

There are no known bat hibernacula or maternity roosts on the parcel. Bat hibernacula have already been addressed above. Maternity roost trees for many bat species are present on the landscape through retention of snags and other wildlife trees during forest management activities when safe to do so. The Riparian Habitat Management Standards will also provide future roosts in the 100 foot no harvest buffers and also within the 100-330 foot managed buffer maintaining mature forest. This variation will also provide different solar inputs on roost trees adding to the diversity of species that can find an appropriate roost site.

Great Blue Heron

There is a known historical Great Blue Heron colony east of the parcel in Misery Twp but none on the parcel. The adjacent colony is monitored annually for activity. If an active colony is discovered on the parcel (by the Grantor or other biologists), we will consult with MDIFW for management guidelines based on the best available science at the time.

Northern Bog Lemming

If any known occurrence is documented (by the Grantor or other biologists), we will consult with MDIFW for management guidelines based on the best available science at the time.

Blackpoll Warbler

Blackpoll Warblers and Bicknell's Thrush overlap in elevation, though Blackpolls may use older stands than Bicknell's for nesting. Timing restrictions on harvesting activities within identified Bicknell's Thrush habitat on Coburn Mountain will protect Blackpoll Warblers as well.

Northern Spring Salamander

Northern Spring salamanders occur in headwater streams with coarse substrates in deciduous and mixed wood forests. The Riparian Habitat Management Standards in the CE provide protection on perennial streams identified on the parcel. If a known occurrence outside of these buffers is documented, (by the Grantor or other biologists), we will consult with MDIFW for management guidelines based on the best available science at the time.

Wood Turtle

Wood Turtles prefer slow-moderate moving rivers and large streams in forested landscapes. There are no known occurrences and the Riparian Habitat Management Standards in the CE provide protection in alignment with the guidelines. If a known occurrence is documented, (by the Grantor or other biologists), we will consult with MDIFW about management guidelines based on the best available science at the time.

6.5 Invasive and Pest Species

As with any forest such as that found on the Protected Property, invasive species may be found from time to time. Invasive species are considered non-native organisms (insects, plants, animals, fungus, etc.) that, when introduced, cause or are likely to cause harm to the environment, economy, or human health. Examples of invasive insect and plant species that may be found over time in the Maine forests include Emerald Ash Borer, Browntail Moth, Spongy Moth, Bittersweet, Knotweed, as well as Phragmites and Aquatic Milfoil. Invasive species control involves prevention, early detection, and management through methods like mechanical, biological, and chemical treatments. Grantor will cooperate with agencies (e.g., MFS) in monitoring programs for invasive species (e.g., emerald ash borer). Controlling the introduction and spread of invasives can be done through both direct and indirect methods. Grantor will individually (and collectively with state and other partners) develop appropriate strategies at specific sites. Considerations for control may include:

- If the invasive site currently is or may in the future adversely impact forest regeneration.
- If the invasive site currently is or may in the future adversely impact a Threatened or Endangered species or Species of Concern site.
- If the invasives site is deemed appropriate and reasonable by Grantor to treat after consultation with state experts, as appropriate. Reasons for treatment may include forest regeneration, impacts to a specific special site, or to lessen spreading risk based on a landscape context for that specific invasive species.

Native species, such as the eastern spruce budworm, can also be pests of concern. The eastern spruce budworm is a native insect that periodically (roughly every 30 to 60 years) undergoes population outbreaks, causing extensive defoliation of spruce and fir trees. Upcoming outbreaks in Maine can often be forecast by monitoring in adjacent Southern Quebec. Effective management of spruce budworm in forestry involves a combination of proactive measures to mitigate its impact and maintain forest health. Key strategies to mitigate the risks of spruce budworm are monitoring and early detection, along with treatment of affected areas with an appropriate treatment, including insecticides such as tebufenozide (e.g., Mimic) and biological controls such as *Bacillus thuringiensis* (Bt). Joint efforts by multiple landowners, researchers, and agencies, such as the Maine Budworm Response Cooperative, Maine Forest Service, Maine Forest Products Council, and University of Maine's Cooperative Forestry Research Unit, can be and are utilized as effective strategies to share knowledge, research, and data. There are also several online GIS-based tools that can assist foresters in the early detection and identification of potential invasive insect and plant species.

6.5.1 Potential Forest Health Considerations

To expand upon these concepts, the following considers in more detail some potential threats to the forest health of the Protected Property and what current activities are occurring to further understand and potentially deal with these threats.

As noted, foresters are trained and responsible for field review of potential local forest health problems and concerns as they conduct their normal field duties. As part of any Integrated Pest Management (IPM) program, monitoring for early detection and tracking findings is critical to getting ahead of such concerns.

Below is a brief summary of the status of a few current threats that may impact the Protected Property through time.

Spruce Budworm

Weyerhaeuser's strategy to address the potential threat of this native insect is built around early detection, targeted intervention, and collaborative response. It aligns with broader regional efforts, including those led by the Maine Budworm Response Coalition, University of Maine, and Maine Forest Service.

Key components include:

1. Monitoring & Detection

- Weyerhaeuser participates in L2 monitoring (tracking overwintering larvae) across over 100 sites in Maine.
    - Of the 100 sites in Maine, three L2 monitoring sites fall within the footprint of the Protected Property while five more are within two miles of the Property.
- Collaboration with the University of Maine's Spruce Budworm Lab, ensures timely data collection and hotspot identification.

2. Early Intervention Strategy (EIS)

- EIS targets small SBW hotspots before populations reach outbreak levels.
- Insecticides like tebufenozide (Mimic) and biological controls such as Bacillus thuringiensis (Bt) are used to suppress larvae while minimizing harm to pollinators.

3. Silvicultural Adjustments

- Weyerhaeuser's internal plans recommend stand rotation and road upgrades to improve access and reduce vulnerability.

- Significant pre-salvage operations are not currently included in the SPW risk management strategy, as the planned EIS approach has demonstrated effectiveness in other regions. However, should substantial mortality occur in merchantable softwood stands—particularly those dominated by balsam fir—these areas will be prioritized for final harvest. This will support outbreak management and facilitate regeneration for the next rotation.
- The necessity and scope of any pre-salvage or salvage activities will be evaluated annually and communicated to the holder during the annual meeting. These assessments will consider ongoing progress toward the mature forest milestones outlined in the Conservation Easement.

4. Collaborative Partnerships

- Weyerhaeuser works with agencies like the Maine Forest Products Council, Maine Forest Service, and University of Maine's Cooperative Forestry Research Unit.
- Joint efforts include data sharing, research, and coordinated aerial spray programs

Emerald Ash Borer

The Maine Forest Service has established quarantine zones for the Emerald Ash Borer (EAB) that now include southern portions of Somerset County. The nearest detection was in Solon in 2025, about 30 miles south of the Protected Property. Currently Weyerhaeuser foresters continue to monitor for signs of this pest as instructed by the Maine Forest Service which also continues to monitor EAB using traps and bio-surveillance methods. In the event EAB is detected, Weyerhaeuser will engage the Forest Service and work to attempt to manage and limit the advancement of this invasive pest.

Beech Leaf Disease

As of 2025, Beech Leaf Disease (BLD) has been confirmed to be found in all counties in Maine, including southern Somerset County. This marks a significant expansion since its initial detection in 2021. While no detections have been reported north of the township of Cambridge, the rapid spread of this relatively new disease in Maine suggests that it is just a matter of time before it is present on the Protected Property.

BLD is caused by a microscopic nematode that overwinters in the buds of beech trees. Symptoms include dark bands on the leaves, curled and deformed leaves, and a diminished, thinning canopy due to premature leaf drop. Tree mortality tends to occur within 2–7 years, especially in smaller trees. Weyerhaeuser foresters are aware of the potential for this disease and will report sightings to the Maine Forest Service to aid in tracking and response.

Hemlock Wooly Adelgid

The Hemlock Woolly Adelgid (HWA) continues to expand its range in Maine, particularly in southern and coastal regions. As of the latest available data, HWA has not been confirmed in Somerset County, but it is approaching from the south and east. Vigilant monitoring is recommended especially in areas with naturally occurring eastern hemlock. The Maine Forest Service has put a quarantine in place that restricts the movement of hemlock nursery stock, logs, and other materials from infested to not yet infested areas. Regular monitoring of the advancement of this invasive pest is important, and Weyerhaeuser foresters are aware and on the lookout for the potential given the hemlock present on the Protected Property.

Forest Tent Caterpillar

The forest tent caterpillar (FTC) is a native defoliator of deciduous hardwoods in Maine, especially aspen, sugar maple, oak, and birch. In 2025, northern and central Maine experienced a continuing outbreak of FTC which was part of a broader regional cycle that began around 2022. Populations follow boom-and-bust cycles, with outbreaks every 10–15 years, lasting 2–5 years. FTC was the most commonly trapped moth in Maine in 2024, with over 1,100 specimens, indicating elevated population levels. Although numbers slightly declined in 2025, defoliation remained widespread. Most affected trees regrew leaves later in the summer, but repeated defoliation over multiple years can lead to reduced growth, increased susceptibility to pests, and tree mortality.

The Maine Forest Service emphasized natural population control via predators and parasites, especially the “friendly fly”, which surged in response to the outbreak. For severe infestations, Bacillus thuringiensis (Bt) can be used, especially on early instar larvae. Monitoring and detection of this native pest is important, and Weyerhaeuser foresters are aware and on the lookout for the potential for widespread defoliation on the Protected Property. In the event of moderate to heavy defoliation (>30%) Weyerhaeuser will consider intervention, especially if repeated over multiple years and will consult with the Holder in advance of implementation of an intervention strategy.

Invasive Plants

Two species of invasive plants that are most often or likely found on the Protected Property are Phragmites and Japanese Knotweed. While both are likely, there are only two documented locations of Phragmites on the edge of the Protected Property along the Mining Road, and no documented locations of knotweed.

Given the various modes of spread of invasive plants, it is quite possible if not likely that additional incidents of these or other invasive plant species could become established on the Protected Property. Foresters are aware of the potential and are trained to identify various species of invasive plants that may be found in the future and as noted previously, Weyerhaeuser has a process in place for documenting observations and locations of such species for interventions as needed.

6.6 Forest Chemical Use

Forest chemical use on the Protected Property will be for silviculture and pest control purposes.

For silviculture purposes, herbicides may be used to control competing vegetation in early stages of stand development, typically in recently established softwood stands. In some cases, herbicides may be used to address a reforestation issue, such as poor growing stock or inadequate stocking levels that may result from natural regeneration challenges.

Pesticides may be used to control insects, such as sawfly and spruce budworm, invasives, or other unforeseen future forest pests.

In all cases, any forest chemical use will be minimized to the extent practicable and strictly follow all State and Federal laws. In addition, all chemical use will adhere to all best management practices and protocols, label requirements, applicator licensing requirements, and current research.

6.6.1 Pesticide Program

The Pesticide Program includes both herbicide and insecticide use. The program emphasizes integrated pest management (IPM), compliance with company policies and standards, and thorough monitoring of pesticide applications to ensure effectiveness and to minimize environmental impact. All activities are overseen by licensed applicators and adhere to Maine Board of Pesticide Control regulations.

Insecticide Use

The last significant application of insecticides for insects in Maine occurred in the early 1990s for a sawfly infestation in spruce plantations. As of 2022, it is recognized that major infestations of the spruce budworm are in Quebec and New Brunswick and future management and control, including spraying, may occur in Maine within the next 10 years (cf. CFRU, MFS and MFPC data).

Weyerhaeuser's strategy to address the potential threat of spruce budworm is built around early detection, targeted intervention, and collaborative response as described elsewhere in this plan. Weyerhaeuser participates in L2 monitoring (tracking overwintering larvae) across over 100 sites in Maine, three of those sites fall within the footprint of the Protected Property. In the event this threat requires intervention for control, insecticides such as tebufenozide (Mimic) and biological controls such as Bacillus thuringiensis (Bt) may be used to suppress larvae. In the event this step is warranted, Weyerhaeuser will collaborate with the Holder to ensure that the requirements of the conservation easement are met.

Herbicide Use

Herbicide use focuses on managing competing vegetation in softwood plantations and naturally regenerating stands to enhance growth and stocking levels, with careful consideration of ecological and regulatory factors.

WY has paused its Maine planting and conifer release programs and is not planning any site preparation herbicide applications in the coming year. Silvicultural practices using herbicide is for one of three purposes:

1. Controlling competing vegetation in either (a) recently established softwood plantations to protect the investment of these plantations, or (b) softwood-dominated natural regeneration where softwood growth rates can be increased with removal of the hardwood competition. A "release spray" herbicide application would be prescribed in these situations following a site assessment of competing vegetation on a case-by-case basis.

2. To address a reforestation issue such as poor or unacceptable growing stock or inadequate stocking levels, both resulting from natural regeneration. A site preparation herbicide application would be followed by planting on a case-by-case basis.

3. To address the presence of invasive species such as phragmites or knotweed, spot treatments are employed to manage small sites of invasives, often found along forest roads or at landing areas. Spot treatments typically involve the targeted application of herbicides or manual removal of invasive plants at the identified sites, ensuring minimal impact on surrounding native vegetation. Foresters are trained to identify and document these incident sites, recording GPS locations and detailed observations, which they then submit to the company staff biologist. After receiving incident reports from foresters, the staff biologist reviews the data and schedules treatment activities, sometimes involving additional field assessments to determine the most effective approach to prevent further spread.

In order to be consistent and have well trained and informed participants in any herbicide applications, Weyerhaeuser developed an Herbicide Application Manual that has been in place and regularly updated for the aerial application of chemicals. In the event such applications are warranted in the future, this manual will serve as an invaluable tool, outlining proper application methods to ensure safety and environmental integrity. A copy of this manual can be provided to the Holder upon request should aerial herbicide applications resume.

Spot herbicide applications have been conducted in the past to address incidents of invasive species such as Japanese knotweed and Asiatic Bittersweet using over the counter herbicides when small, isolated incidents of invasives have been located. In the event more significant

herbicide use becomes a need in the future, Weyerhaeuser will inform the Holder of such applications.

Pesticides - Process/Procedures

As noted above, Weyerhaeuser has no current plans for the use of insecticides or for conducting site prep aerial applications of herbicides for conifer release. In the event applications become warranted, use will be minimized to the extent practicable and only chemicals licensed by the EPA and registered for use in Maine will be used for such purposes. Weyerhaeuser will follow all Maine Board of Pesticide Control rules and regulations including the use of licensed pesticide applicators in good standing. For aerial herbicide applications, Weyerhaeuser's Maine Herbicide Manual as noted previously will be strictly followed. All chemical use will adhere to best management practices and protocols, label requirements and will be based upon the latest and most current research. The Holder will be notified in the event that pesticide use becomes a need in the future for the Protected Property.

6.7 Climate Change

Climate change increases uncertainty about future forest conditions. A changing climate will likely affect tree growth rates, mortality, disturbance patterns and the distribution of tree species after disturbances. Models suggest that we will experience shifts in the ranges of trees and other plants, animals, and pests. More frequent extreme wildfires and weather events will lead to altered disturbance regimes and will necessitate adjustments in forest operations and planning. Management aimed at addressing these uncertainties must change over time with the best available science.

Detailed below are key risks identified and Grantor's plan to address:

- Risk: Decreased forest health & productivity due to increased invasive insect species, diseases & pathogens, and tree stress from less-than-optimal growing conditions resulting from changing precipitation and/or temperature patterns.
    - Increase forester awareness of forest health issues, discovery and monitoring of new issues, coordination of reporting and information exchange with state and academic partners, and research collaboration.
    - Maintain complex forest structure, diverse forest composition, healthy soils, and address invasive species as appropriate.

- Risk: Damage to company infrastructure such as roads and stream crossings from changing precipitation patterns and extreme weather events.
    - When constructing new or replacing existing stream crossings, size the new structure according to Stream Smart principles to address future likely increased water flows.
    - When building new or upgrading legacy roads, address future potential increased water flows by installing adequate drainage such as the proper size and spacing frequency of cross-drain culverts.

- Risk: Increased concern for water resources (quantity and quality) from changing precipitation patterns and wildlife species from changing habitat.
    - Implement BMPs to address water quantity and quality issues as precipitation patterns change or extreme weather events increase.
    - Train foresters and logging/road contractors in BMP implementation that includes climate smart practices.
    - Collaborate on related research and new tool development and incorporate shared learnings into our practices.

    - Collaborate with third parties to upgrade stream crossings beyond our own road program capabilities.
    - Provide diverse forest structure, forest composition, habitat structures like legacy trees, and snags, special site protections, threatened & endangered species conservation, healthy soil and water bodies (wetlands, riparian areas, vernal pools, ponds, etc.) at the connected landscape level to maintain biodiversity resilience into the future.

- Risk: Increased wildfire risk due to changing precipitation patterns.
    - Increase coordination with state agencies responsible for fire responses.

Climate change effects may impact the growth models used as a basis for establishing the Mature Forest Habitat projections set forth in this FMP, including the ten-year Milestones anticipated to be achieved, as described in Section 4.1. The Grantor will evaluate the potential impacts of climate change on the Mature Forest Habitat projections and will be prepared to present such impacts as may be necessary during annual meetings with Holder. If any given Milestone is not met due to climate change impacts (such as "Force Majeure Events" described in Section 4.4.3 - hurricane, fire, flood, drought, disease, or forest health pest outbreak), Grantor and Holder agree to mutually discuss solutions.

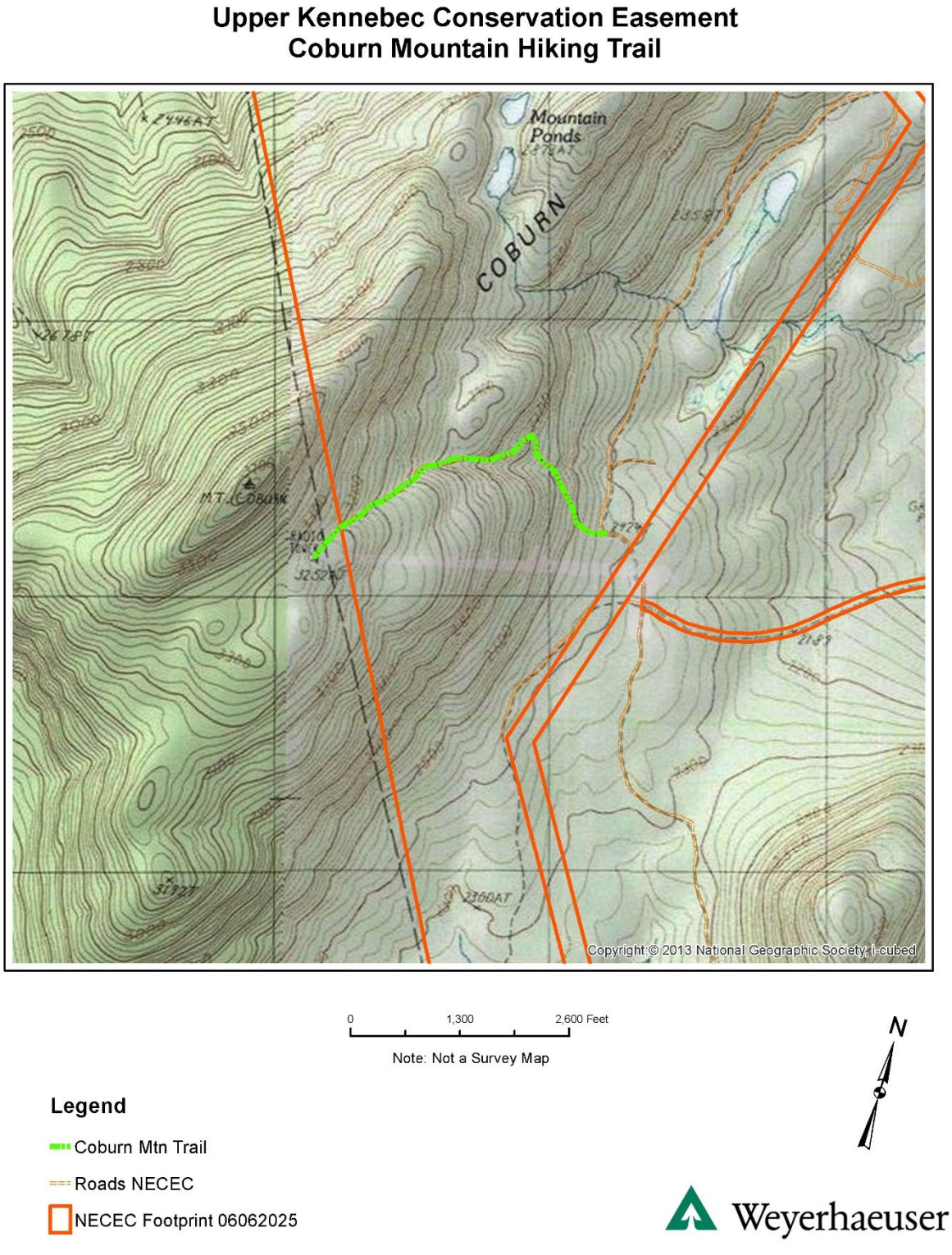
6.8 Recreation

Access for recreation, including rules and regulations, is addressed above in Section 5.7.

Description and Mapping of Known Recreational Spots and Trails:

There are no designated hiking trails on the Protected Property. There is one unofficial hiking trail located in Johnson Mtn Township near the base of the former Enchanted Mtn Ski Slope. The approximate location of the trail is mapped in **Figure 17**. The trail is located on a former logging access road on the toe slope of Coburn Mountain and is unimproved and unsigned.

Figure 17. Coburn Mountain Trail in Johnson Twp on the Protected Property



7.0 Regulations Applicable to the Protected Property

There are several state and federal laws that apply to forest management activities within the State of Maine. Weyerhaeuser requires strict adherence to the various requirements of the following regulations in all forest management activities on Maine timberlands. Weyerhaeuser monitors these laws and regulations for change and works to ensure company forest managers have the information and tools they need to understand and adhere to these requirements.

7.1 Forest Licensing Law

This law requires that any individual hired to provide professional forestry services, such as creating a management plan or overseeing a harvest, must be licensed by the state. Weyerhaeuser employs licensed professional foresters to manage all company timberlands, including the Protected Property in Maine.

7.2 Tree Growth Tax Law

The Protected Property is enrolled in the Tree Growth Program and current plans are valid through 2027. Maine's Tree Growth Tax Law offers property tax relief for landowners who manage their forested land for commercial timber production, allowing it to be valued for its current use rather than its potential development value. To qualify, land must be used for a commercial forestry enterprise, and landowners must notify the town or state assessor and meet specific acreage and management requirements. Property owners pay an annual excise tax at a set rate per acre and face penalties if they withdraw land from the program.

This law is a tax program that provides for the valuation of forestland based on its productivity value, rather than its market value, for property tax purposes. To qualify for this tax treatment, landowners must:

- Maintain a minimum of 10 forested acres.
- Have a management plan developed or reviewed and approved by a licensed forester.
- Actively practice forestry on their land.

7.3 Protection and Improvement of Waters Law

The Maine Protection and Improvement of Waters law (Title 38, Chapter 3 of the Maine Revised Statutes) complements the federal Clean Water Act (CWA) by providing a state-specific framework that aligns with and expands upon federal water quality goals. This law and the Erosion and Sedimentation Control Act require all landowners to protect water quality during forest operations. The law works in conjunction with other state regulations, such as the Maine Forest Practices Act, to prevent water pollution and protect water quality during timber harvesting and other forest operations.

Key aspects of forest management covered by the law:

- Protection of water bodies: Forest operations are regulated to prevent erosion and sedimentation that can harm water quality in protected areas, including rivers, streams, brooks, and wetlands.

- Shoreland Protection: Timber harvesting is also regulated by Statewide Standards for Timber harvesting in Shoreland Areas, expanded upon below.

7.4 State of Maine Forest Practices Act, 12 MRS §§ 8866 et seq.

Forest management is governed by a combination of state and federal regulations designed to ensure sustainable practices, protect natural resources, and preserve wildlife habitat. The most significant state-level law is the Maine Forest Practices Act, overseen by the Maine Forest Service MFS).

The Maine Forest Practices Act is found within **Title 12, Part 11, Chapter 805, Subchapter 3-A** of the Maine Revised Statutes. The law is officially titled "Forest Harvest Regulations" and is managed by the Maine Forest Service (MFS). This law mandates specific standards for commercial timber harvesting, particularly to prevent "liquidation harvesting," where timber is rapidly harvested with no plans for regeneration.

Administrative rules under the Forest Practices Act cover forest operations, with a focus on clearcutting, forest regeneration, and activities in sensitive shoreland areas.

The primary rules include:

- **Chapter 20 Rule: Forest Regeneration and Clearcutting Standards**: This rule governs performance standards for clearcuts, including size limitations, separation zones, and requirements for regeneration following a harvest.
    - **Clear-cut definitions**: A clear-cut is defined as timber harvesting on a forested site greater than 5 acres that results in a residual stand density below a certain threshold. Timber harvesting operations that create clear-cuts of over 5 acres must meet performance standards regarding size, separation zones, and regeneration.
        - Separation zones: Clear-cuts must be separated from one another by forested separation zones to limit the overall size of harvested patches.
    - **Forester involvement**: A Licensed Forester must prepare harvest plans for clearcuts larger than 20 acres. For larger clearcuts (Category 3, greater than 75 acres), the plan must be submitted to the Maine Forest Service for approval 60 days in advance.

- **Regeneration requirements**: There must be adequate regeneration of trees within five years after harvesting. After a clear-cut, the harvested site must be regenerated to a new stand of trees that meets specific density and height requirements.

- **Chapter 21 Rule: Statewide Standards for Timber Harvesting and Related Activities in Shoreland Areas**: This rule provides specific regulations for forest management activities within Maine's protected shoreland zones, which include areas near lakes, ponds, rivers, streams and wetlands, to protect water quality and minimize soil erosion. Key requirements include:

    - Vegetation clearing limits: Strict limits are placed on the amount of tree clearing allowed within the shoreland zone to maintain water quality and habitat.

    - Erosion control: Landowners must take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected resource. The expectation is that BMPs will be put in place in advance and will be utilized during project activities.

- **Chapter 26 Rule: Forest Operations Notification Standards**: Landowners or their agents must notify by filing a Forest Operations Notification with the Maine Forest Service before beginning any timber harvesting activities; Notification must be posted at the harvest site during the harvest activities. Landowners who file a notification are required to submit an annual report of their harvesting activities to the MFS by January 31st of the year following activities.

- **MFS Chapter 27 Rules: Timber Harvesting and Related Activities in Unorganized Areas**: This rule specifically regulates timber harvesting and forestry-related activities and sets standards for operations specifically within the unorganized territories, operating as a set of specialized rules within the broader framework established by Chapter 10. Chapter 27 focuses exclusively on the specifics of timber harvesting, land management roads, and gravel extraction for forestry purposes.

- **Other applicable laws**: All harvesting activities must also comply with other relevant federal, state and local laws, rules and any town ordinances.

7.5 LUPC Chapter 10 – Land Use Districts and Standards

Maine's Land Use Planning Commission (LUPC) Chapter 10, "Land Use Districts and Standards," contains the comprehensive administrative rules that govern land use activities and zoning in the unorganized areas of the state such as the Protected Property covered by this forest management plan. It is the primary document used to determine what is and is not permitted within specific

land use subdistricts. Chapter 10 sets the overarching land use standards, including zoning districts and rules for a wide range of activities in the unorganized territories.

LUPC Chapter 10 is used in conjunction with MFS Chapter 27 whereby LUPC Chapter 10 defines *where* forest management can occur, and MFS Chapter 27 defines *how* the specific forestry activities are to be conducted.

7.6 Federal Regulations Influencing Forest Management in Maine

Federal regulations influencing Maine's forest management include the Endangered Species Act (ESA), which protects threatened and endangered species and their habitats, and regulations under the Clean Water Act (CWA) that govern water quality in forests as noted previously.

Here's a breakdown of the key federal laws:

- **Endangered Species Act (ESA) of 1973:** The Endangered Species Act establishes protections for fish, wildlife, and plants that are listed as threatened or endangered; provides for adding species to and removing them from the list of threatened and endangered species, and for preparing and implementing plans for their recovery; provides for interagency cooperation to avoid take of listed species and for issuing permits for otherwise prohibited activities; provides for cooperation with States, including authorization of financial assistance;
    - **Purpose:** To prevent the extinction of endangered plants and animals and to recover their populations.

- **Clean Water Act (CWA):** The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

  Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. EPA has also developed national water quality criteria recommendations for pollutants in surface waters.
    - **Purpose:** To maintain the quality of the nation's waters.

8.0 Annual Meeting

The Grantor and Holder agree to hold an Annual Meeting in order to facilitate effective communication and to ensure a shared understanding of the status of the forest condition as it relates to the mature forest and perennial stream management requirements. The Holder will be responsible for scheduling the meeting prior to March 30th each year. The Annual Meeting will report on the following:

1. Current Mature Forest Percentage
2. Mature Forest Percentage in Strategic Harvest Plan in 2065
3. Forest Health and Climate Change concerns – Observed/Anticipated
4. Holder monitoring activities and Findings for the previous year
5. Harvest activities – previous 12 months
6. Current planned harvest activities, subject to change – next 12 months
7. Perennial Stream Crossings
    a. Previous year – actual
    b. Current year – planned
8. Perennial Stream Mapping Review:
    a. Review of any natural stream channel movement over time of the 88 miles of perennial streams in BDR with corresponding GIS update.
9. Forest Management Activities within Mature Forest Buffers - Previous year and Current year planned
    a. 0-100 foot
    b. >100 to 330 foot

9.0 Figures, Tables and Maps

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SECOND
EXHIBIT D-2

Appendix A: Conservation Easement

NEW ENGLAND CLEAN ENERGY CONNECT SEGMENT 1 CONSERVATION EASEMENT

I. PROJECT NAME

New England Clean Energy Connect Segment 1 Conservation Easement

II. WORDS OF CONVEYANCE

Weyerhaeuser Company, having an address of 220 Occidental Avenue South, Seattle, WA 98104, (referred to as the "Grantor", which word shall, unless the context clearly indicates otherwise, include the above-named Grantor, its successors and assigns), for consideration paid and not as a gift, HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands** (the "State," which word shall, unless the context clearly indicates otherwise, include the State's successors and assigns, or "Holder"), a governmental entity having a mailing address of 22 State House Station, Augusta, Maine 04333 with QUITCLAIM COVENANT:

A. in perpetuity, the following described conservation easement (the "Conservation Easement" or the "Easement") on, over, under, and across the real property in Bradstreet Township, Parlin Pond Township, and Johnson Mountain Township, Somerset County, Maine, more particularly described in Exhibit A, subject to those exceptions to title set forth therein (the "Protected Property"), and generally depicted on the plan attached hereto and made a part hereof as Exhibit B as set forth below. Provided that within twenty-four months of the conveyance of this Conservation Easement from Grantor to Holder, a boundary line survey shall be completed of the Protected Property that also depicts any and all of the then-existing following located on the Protected Property: rights-of-way, roads, and structures and other improvements. Said survey shall be recorded as soon as practicable after completion and, upon recording, shall be incorporated herein and act as an amendment to this Conservation Easement to replace Exhibit B;

B. non-exclusive easement for Holder's pedestrian and vehicular access to the Protected Property as necessary or appropriate to exercise Holder's rights of monitoring and enforcement of the Easement hereunder, over:

    1. any and all rights-of-way and roads owned by Grantor, as more particularly described in Exhibit A and depicted on Exhibit B; and

2. any and all rights-of-way and roads owned by third parties over which Grantor has rights of access to the Protected Property to the extent that Grantor has the right to grant the same.

C. a non-exclusive right of public pedestrian access on and across the Protected Property for purposes of Non-Intensive Outdoor Recreation.

Grantor further HEREBY GRANTS to the **STATE OF MAINE, acting by and through its Department of Environmental Protection**, a governmental entity having a mailing address of 17 State House Station, Augusta, Maine 04333, third party enforcement rights of the Conservation Easement as set forth in Section X.

III. DEFINITIONS

A. "Alternative Qualified Holder" is defined in Section XI.B.
B. "Baseline Documentation" is defined in Section VII.A.5.
C. "Best Management Practices" are those forest management practices set forth in the publication entitled "Best Management Practices for Forestry: Protecting Maine's Water Quality," prepared by the Maine Department of Agriculture, Conservation and Forestry, Bureau of Forestry, in such publication's current version at the time of the grant of this Conservation Easement, and as the same may be further amended, supplemented, or replaced after the date of this grant.
D. "Commercial Forest Management Activities" include Commercial Forestry and timber cruising; resource evaluation; herbicide, pesticide, and fertilizer application; timber stand improvement; pruning; mechanical timber harvesting and other forest harvesting; wood chip production; forest products transportation; natural regeneration of forest stands; prevention of fire and disease; eradication of invasive species; wildlife habitat improvement; general maintenance of forest health and biological diversity; maple sugaring; forest carbon sequestration; forest carbon credit sales (consistent with Section VII.A.4); other substantially similar and associated activities; and the construction, creation, use, and maintenance of Land Management Roads, skid trails and Winter Haul Roads, turnouts, timber landings, and crossings of flowing waters for such purposes, all as consistent with the terms of this Conservation Easement.
E. "Commercial Forestry" is defined as the planting, growing, cultivation, stocking, and harvesting of trees and other forest products to produce marketable forest products.
F. "Conservation Plan" is defined in the Maine Department of Environmental Protection ("MDEP") Findings of Fact and Order, issued May 11, 2020, and the Maine Board of Environmental Protection ("MBEP") Findings of Fact and Order, issued July 21, 2022.
G. "Conservation Values" are defined in Section V.
H. "Forestland" is defined as land stocked with trees of any size or land formerly having had such tree cover that is being managed to return to forest cover.
I. "Force Majeure Event" is defined in Section VII.A.6.
J. "Forest Management Plan" is defined in Section VII.A.6.a.
K. "Grantor" is defined as the owner in fee simple of the real property that is subject to this Conservation Easement. The term "Grantor" shall include Grantor, its successors and

assigns, and their respective authorized agents, contractors, and employees, and where specifically set forth herein, licensees, and lessees of Grantor, its successors and assigns.

L. “Land Management Road” is defined as a route or track consisting of a bed of exposed mineral soil, gravel, or other surfacing material constructed for, or created by, the repeated passage of motorized vehicles and used primarily for forest management activities (refer to Exhibit C), but such definition does not include log landings, skid trails, skid roads, and Winter Haul Roads.

M. “Mature Forest” is defined as a forest stand consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees.

N. “Mature Forest Goal” is defined in Section VII.A.6.

O. "Milestones" is defined in Section VII.A.6.

P. “MNAP” means the Maine Natural Areas Program, which is part of the Maine Department of Agriculture, Conservation and Forestry, or any successor State program or bureau that performs similar public functions.

Q. “MDIFW” means the Maine Department of Inland Fisheries and Wildlife, or any successor State agency or bureau that performs similar functions.

R. “NECEC” is defined as the New England Clean Energy Connect Transmission Line that runs from the Canadian border in Beattie Township, Maine to the point of interconnection to the New England power grid in Lewiston, Maine.

S. “Non-Intensive Outdoor Recreation” is defined as dispersed, non-commercial, non-exclusive, non-motorized individual or small group recreational activities that do not generally rely on buildings or spectator facilities. Such uses include hunting, fishing, trapping, hiking, nature observation, picnicking, boating, cross country skiing, snow-shoeing, dog sledding, bicycling (including electric bicycles), horseback riding, swimming, primitive non-commercial camping, and outdoor education and nature study, and enjoyment of open space; provided that the incidental use of the Protected Property by the public for these purposes supported by paid guides or outfitters is not commercial or exclusive use. The establishment by Grantor of permits and collection of access fees for use of campsites and other recreational facilities permitted under this Conservation Easement is also not commercial or exclusive use.

T. “Normal high watermark of the shore” is defined as that line on the shore of water bodies which is apparent from visible markings, changes in the character of the soils due to the prolonged action of the water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial land. In places where the shore or bank is of such character that the high watermark cannot be easily determined (rockslides, ledges, rapidly eroding or slumping banks), the normal high watermark will be estimated from places where it can be determined by the above method. Distances from the normal high watermark will be determined by horizontal measurement.

U. “Permitted Excavation Activities” is defined in Section VII.D.3.

V. “Plantation” is defined as stands that are artificially regenerated via intentional planting methods.

W. “Protected Property” is defined in Section II.A.

X. "Productive Forest Acres" are defined as any area capable of growing a crop of trees that can reach Mature Forest conditions. These areas will generally have a site index of 40 or greater or, at a minimum, the ability to support trees greater than 50 feet in height.

Y. "Riparian Habitat Management Standards" are those standards for riparian areas contained in Section VII.A.6.

Z. "Segment 1" is defined as the portion of the NECEC that runs from Beattie Township, Maine to The Forks Plantation, Maine.

AA. "The Order" is defined as the MDEP Findings of Fact and Order, issued May 11, 2020, permitting construction of the NECEC, and the MBEP Findings of Fact and Order, issued July 21, 2022, affirming and amending the May 11, 2020, MDEP Findings of Fact and Order.

BB. "The Parties" is defined as Grantor, Holder, and MDEP, for third party enforcement purposes.

CC. "Wetland" means any area saturated or inundated by water at a frequency or for a duration sufficient to support, and which under normal circumstances does support, vegetation typically adapted for life in saturated soils. In most cases, this would include areas below a recognizable debris line resulting from recurring, not extreme, water action. The "upland edge" of a wetland is the boundary between the upland and wetland, and not the edge of open water. Refer to Exhibit D for a map of wetlands and streams existing at the time of recording this Easement.

DD. "Winter Haul Road" means a route or travel way that is utilized for Commercial Forest Management Activities conducted exclusively during frozen ground conditions. Winter Haul Roads must follow applicable Best Management Practices.

IV. PURPOSES

The purposes of this Conservation Easement (the "Conservation Purposes") are to conserve in perpetuity habitat in the vicinity of NECEC Segment 1 with sufficient Mature Forest acreage to mitigate and offset the effects of habitat fragmentation associated with the construction and maintenance of NECEC Segment 1, including the related edge effect; to promote habitat connectivity and conservation of Mature Forest areas; and to provide conservation compensation for the NECEC.

The Conservation Purposes of this Conservation Easement are also to ensure the forests on the Protected Property are managed to maintain a healthy, biologically diverse, productive, and Mature Forest with diverse age classes; to conserve in perpetuity the Conservation Values of the Protected Property including wildlife and ecological values; to conserve water quality, wetlands, and riparian values; and to provide guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation.

Grantor covenants that no acts or uses that are inconsistent with the Conservation Purposes shall be conducted on the Protected Property.

V. RECITALS

The following recitals (the "Recitals") more particularly describe the conservation attributes and Conservation Values of the Protected Property and the significance of this grant:

WHEREAS, Grantor is the sole owner in fee simple of 50,063 +/- acres of real property in Somerset County, as the same is described in Exhibit A, and wishes to convey a Conservation Easement over the 50,063 +/- acre Protected Property, which consists of substantially undeveloped forested land;

WHEREAS, the Protected Property is in the vicinity of Segment 1;

WHEREAS, in connection with the NECEC, the MDEP and the MBEP issued the Order;

WHEREAS, because of the impacts of the NECEC, the Order requires NECEC Transmission LLC to permanently conserve 50,000 acres of land in the vicinity of Segment 1 to, among other things, ensure the protection of wildlife;

WHEREAS, the Order requires NECEC to create and implement a Conservation Plan, as described and defined in the Order;

WHEREAS, the Conservation Plan has as its primary goal compensation for the fragmenting effect on habitat of the NECEC, and the related edge effect, by promoting habitat connectivity and conservation of Mature Forest areas;

WHEREAS, the Order allows commercial timber operations on the Protected Property provided that such operations are consistent with the conservation of Mature Forest areas;

WHEREAS, the Protected Property is desirable for conservation in furtherance of the goals of the Conservation Plan and includes the following conservation values to be conserved (collectively, the "Conservation Values"):

a. The Protected Property is a predominately forested land area of significant breadth and diversity, with outstanding values including sizeable Mature Forests, large blocks of wildlife and plant habitat, rare, threatened, and endangered species and their associated habitat, extensive bogs, wetlands, rivers, streams, lakes, remote ponds and other water bodies, and unique natural features, all of which are further quantified and delineated in the Baseline Documentation.

b. The Protected Property has ecological importance as wildlife and fisheries habitat. Conservation of the Protected Property under the terms of this Conservation Easement, by prohibiting development of the Protected Property in excess of that allowed under this Conservation Easement, will have a permanent, beneficial impact on the ecological benefits of such areas and species.

c. The Protected Property provides habitat that is suitable for diverse wildlife species of conservation interest, including mammals such as pine marten and white-tailed deer, as well as brook trout, landlocked salmon, other fish, and many species of forest interior dwelling birds, waterfowl, reptiles, and amphibians.

d. The Protected Property contains identified recreational areas important to the people of the State of Maine, and guaranteed access to and use of the Protected Property by the general public for Non-Intensive Outdoor Recreation in perpetuity, consistent with the preservation and protection of the other values of the Protected Property and Grantor's reserved rights, is in the public interest;

WHEREAS, subject to the terms of this Conservation Easement and an approved Forest Management Plan, the continued management of the Protected Property as a dynamic landscape at different stages of growth, ages, and composition to develop and conserve Mature Forest is compatible with the preservation and promotion of habitat connectivity, minimizes fragmentation of forest ecosystems, and provides more permanent forest and habitat resiliency;

WHEREAS, pursuant to 33 M.R.S. § 476(2)(A) and 12 M.R.S. § 1850(1), Holder may acquire and hold a conservation easement on the Protected Property, which conservation easement is a component of the Conservation Plan required by the Order;

WHEREAS, the Parties have prepared and completed the Baseline Documentation at the time of the recording of this Conservation Easement, which, in accordance with Section VII.A.5, is intended to serve as an objective, although not exclusive, information baseline for monitoring compliance with the terms of this Conservation Easement;

WHEREAS, the Parties desire to implement certain restrictions on the use of the Protected Property, impose obligations on Grantor and any future owners of the Protected Property, and grant rights to Holder, and the MDEP, with respect to the Protected Property, in perpetuity, as set forth in this Conservation Easement; and

WHEREAS, the MDEP, has approved this Conservation Easement by order dated _____.

VI. INCORPORATION OF PURPOSES AND RECITALS

NOW THEREFORE, in consideration of the foregoing Conservation Purposes and Recitals, and for the benefit of the public, the Parties have established this Conservation Easement on, over, under, and across the Protected Property consisting of the following terms, covenants, and restrictions, which shall run with and bind the Protected Property in perpetuity.

VII. RESTRICTIONS AND RESERVED RIGHTS

Except for the rights expressly conveyed by this Conservation Easement to Holder (hereinafter "Holder's Affirmative Rights"), and except for the restrictions stated in this Conservation Easement, Grantor retains all ownership rights in the Protected Property and may use the Protected Property for any lawful purpose, including, without limitation, those uses expressly reserved by Grantor herein (hereinafter "Grantor's Reserved Rights"), provided that any such use is consistent with the Conservation Purposes of this Conservation Easement. Any activities on or uses of the Protected Property that are inconsistent with the Conservation Purposes are prohibited. Without limiting the generality of the foregoing, the following restrictions and other terms are applicable to the Protected Property.

A. LAND USE

1. **Limitations on Development; Exceptions.** Residential, industrial, and commercial activities and development, quarrying, mining, mineral development, alteration of watercourses and water bodies, and building development activities are prohibited on the Protected Property, except as permitted for the authorized uses in this Conservation Easement, including but not limited to: Commercial Forest Management Activities (see Section VII.A.6), Permitted Excavation and Use of Gravel, Sand, and Rock, (see Section VII.D.3), Ecosystem Service Markets (see Section VII.A.4), Forest and Vegetation Management (see Section VII.E), Incidental Operations (see Section VII.E) and for the enhancement of Non-Intensive Outdoor Recreation as defined herein and other activities expressly permitted by this Conservation Easement or reserved by Grantor.

   Without limiting the generality of the foregoing restriction, except as currently exists as reflected in the Baseline Documentation, residential housing units, condominiums, trailer parks, mobile homes, high-intensity lighting, motels or hotels, commercial advertising, billboards, towers, antennas or equipment for telecommunications or radar, solar power or wind power structures or transmission lines, and use of the Protected Property as an aircraft landing site except in an emergency, are all specifically prohibited.

2. **Storage and Disposal of Waste; Organic Matter; Hazardous Substances Associated with Commercial Forest Management.** Discharge of wastewater into surface or ground waters on or under the Protected Property is prohibited. It is forbidden to dispose of, or store, on the Protected Property, rubbish, garbage, building debris, unserviceable vehicles and equipment or parts thereof, hazardous or other waste, hazardous or toxic substances, or other unsightly or offensive waste material. Except that organic matter and logging slash generated on the Protected Property, but not elsewhere, may be used, stored, or disposed of on the Protected Property as part of Commercial Forest Management Activities. Other waste generated by permitted uses on the Protected Property may be stored temporarily in appropriate containers for removal at reasonable intervals, all in accordance with applicable state, local, and federal law. Notwithstanding the foregoing, fuel and other hazardous or toxic substances used in the ordinary course of conducting Commercial Forest

Management Activities on the Protected Property may be stored thereon in accordance with applicable state, local, and federal laws and regulations.

3. **Limitations on Additional Easements and Other Rights.**

   (a) Access and Utility Easements. With respect to State Route 201, Holder may provide its prior written approval if such easement rights minimize adverse impacts to the Conservation Values and Holder determines that such easement rights are: (1) necessary for the Maine Department of Transportation to comply with federal or state law or (2) necessary for public safety.

   (b) Leases and Licenses. No new leases, licenses, or other interests in land that establish a right-of-way, corridor of ingress or egress, driveway, road, utility distribution or service line, or tower shall be granted, constructed, developed, or maintained into, on, over, under, or across the Protected Property without the prior written approval of the Holder. Notwithstanding the foregoing, advanced notice to Holder shall not be required for short-term and temporary licenses or leases across existing rights-of-way or land, so long as such licenses or leases do not include any land-clearing activities. For purposes of this Section VII.A.3(b), short-term and temporary means less than three years. Sugar bush leases may be granted, provided that Grantor obtains the Holder's prior written approval.

   (c) Conservation Easements. No additional conservation easements or deed restrictions shall be placed on the Protected Property without the prior written approval of the Holder.

4. **Ecosystem Service Markets.** Grantor may participate in ecosystem service market programs, including but not limited to carbon credit programs and stream, wetland, and species mitigation credit programs, that are consistent with this Conservation Easement and that do not affect Holder's right of enforcement of the Conservation Easement.

5. **Baseline Documentation.** To describe the present condition of the Protected Property and its relevant natural features, resources, and conditions, Grantor and Holder have established an inventory of the same (the "Baseline Documentation") and have certified the same as an accurate representation of the condition of the Protected Property as known to them as of the date of this grant. The Baseline Documentation is incorporated into this Conservation Easement by reference.

   Holder will prepare addenda to the Baseline Documentation from time to time to document changes to the Protected Property. Such addenda will become a part of the Baseline Documentation upon the mutual approval of Grantor and Holder. Holder will forward copies of such addenda to Grantor for Grantor's records. Holder also shall provide to MDEP, upon request, copies of the then-current Baseline Documentation with all applicable addenda.

6. **Land Uses in Accordance with a Forest Management Plan, Best Management Practices, and Applicable Laws and Regulations.**

To establish and maintain in perpetuity wildlife travel corridors along riparian areas and between Mature Forest habitat, a 100-foot no-harvest buffer must be maintained around all perennial streams and associated open wetlands as depicted in the Baseline Documentation beginning at the normal high-water line (up to no more than approximately 2,400 acres), and management must be maintained for continuous Mature Forest habitat from 100 feet to 330 feet from the normal high water line (up to no more than approximately 4,500 additional acres). Harvesting equipment crossings of these perennial streams is prohibited, except to construct road or skid trail crossings, as described in the Annual Report described in subsection VII.E.1(c)ii., to facilitate Commercial Forest Management Activities, in which case those crossings will be minimized and constructed to protect streambank integrity (all of the preceding in this paragraph being "Riparian Habitat Management Standards").

At a minimum, Commercial Forest Management Activities must result in 50% of the Productive Forest Acres as identified in the Baseline Document and Forest Management Plan of the protected property with a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees where present prior to management activity no later than December 31, 2065, and thereafter in perpetuity (the "Mature Forest Goal"). Progress toward the Mature Forest Goal will be made at the following rates: 13% in 2025, 20% in 2035, 30% in 2045, 40% in 2055, and 50% in 2065 (collectively, "Milestones"). Progress toward reaching the Milestones and Mature Forest Goal will be provided to Grantor in annual progress reports and, as necessary, addressed in updates to the Forest Management Plan. Holder has the right to seek verification of Grantor's measurements toward reaching the Milestones and Mature Forest Goal, provided that such verification is performed by the Maine Forest Service or another third party agreed to by Grantor. Notwithstanding the above, Grantor and the Holder agree that in the event that a hurricane, fire, flood, drought, disease, or forest health pest outbreak causes or substantially contributes to the failure of Grantor to meet the Milestones or Mature Forest Goal ("Force Majeure Event"), then Grantor shall not be found in non-compliance with this Conservation Easement. Following such an event, the Grantor and Holder shall work cooperatively to revise the Forest Management Plan in furtherance of the Conservation Values of this Conservation Easement, which may include deferring further harvests until the Mature Forest Goals are met. Any further harvesting shall require prior written approval of the Holder and give priority to restoring progress towards the Milestones and the Mature Forest Goal.

A Forest Management Plan (the "Forest Management Plan") must be developed for the Protected Property as required by the Order. All permitted land use activities on the Protected Property must be conducted in accordance with applicable local, state, and federal laws and regulations and Best Management Practices, in a manner consistent with

the Purposes and other terms of this Conservation Easement, and in conformity with the Forest Management Plan.

(a) Forest Management Plan. As of the date of this Conservation Easement, Grantor has submitted a 10-year Forest Management Plan, for Holder approval, that meets the requirements set forth in this Section VII.A.6. The Forest Management Plan has been prepared for Grantor by one or more professional foresters licensed in the State of Maine and has been approved by the Holder and MDEP as consistent with the terms of this Conservation Easement. All permitted land use activities on the Protected Property, including Commercial Forest Management Activities, must be conducted in accordance with the approved Forest Management Plan, except for preliminary resource evaluation. Updates to the Forest Management Plan must be completed every ten years and prepared by a professional forester licensed in the State of Maine and must comply with the requirements of this Conservation Easement. The Grantor must provide to Holder a copy of the Forest Management Plan. As specified in Section VII.A.6(f), Grantor must also provide to Holder for Holder's review, but not for Holder's approval, a copy of the ten-year updates to the Forest Management Plan.

(b) Provisions of the Forest Management Plan - General. The Forest Management Plan must include, at a minimum, the following information:

i. identification of the natural and physical features of the Protected Property at the time of adoption and at the time of periodic updates of the Forest Management Plan, including forest types, species composition, current stocking levels, age, quality, health, and relevant stand history to the extent known; current and planned harvest areas; existing access routes; wetlands and water bodies; and locations of special plant or wildlife habitat, including significant wildlife habitats, habitat for rare, threatened, or endangered plant and wildlife species, and rare or exemplary natural communities identified in publicly available information; and other special management areas;

ii. a description of Grantor's actions to protect and manage soil productivity and water quality, including, where Commercial Forest Management Activities are undertaken, practices to be employed upon completion of harvesting operations to ensure soil stabilization as may be required to comply with Best Management Practices, or other comparable or more protective standards for soil and water protection acceptable to Grantor and approved in advance by Holder;

iii. a description of how Commercial Forest Management Activities and other permitted activities will be conducted to: (1) minimize impacts to important plant and wildlife habitats present; (2) manage known site-specific occurrences of animal and plant species that are listed by state or federal agencies as endangered, threatened, or of "special concern" for such time period as such species are so listed; and (3) meet the requirements of state and federal law regarding threatened and endangered species and include best management practices for these species as proposed during consultation with MDIFW. So long as appropriate

consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

iv. a description of the foreseeable situations in which chemical applications will be recommended, including the type, method of application, and recommended measures to protect water quality, fish and wildlife, and public safety.

v. management guidelines and restrictions for the following areas: (1) Deer Wintering Areas as mapped by the MDIFW or successor agency; and (2) vernal pools, Bat Hibernacula, Inland Wading Bird and Waterfowl Habitats, Heritage Fish Waters, and rare / exemplary natural communities, as identified by MNAP. Management guidelines and restrictions on activities within these areas should be consistent with this Conservation Easement, Best Management Practices, and MDIFW and MNAP recommendations, and with goals of improving forest health, promoting Mature Forest, and protecting plant and wildlife habitat and water quality. So long as appropriate consultations are conducted and documented, the requirements of this section will be considered complete for Forest Management Plan approval.

vi. a description of the Milestones and how the Protected Property will be managed to meet the Mature Forest Goal to provide for blocks of areas of habitat for species preferring Mature Forest habitat and wildlife travel corridors along riparian areas and between Mature Forest habitat; and

vii. a description and mapping of known recreational spots and trails used by the public; and

viii. a copy of this Conservation Easement as an Appendix to the Forest Management Plan.

(c) Additional Provisions of the Forest Management Plan Specific to Commercial Forest Management Activities. The Forest Management Plan must contain the following additional information:

i. a description of forest management goals and how forestry methods and actions proposed will meet the Mature Forest Goal and other requirements of Section VII.A.6, protect forest health, and are consistent with the Conservation Purposes and other terms of this Conservation Easement, taking into account the natural structure, function, and dynamics of the forest to the extent practicable given baseline forest conditions as of the date of this Conservation Easement;

ii. a recent or reasonably updated forest inventory at a density appropriate to the scale and history of the forest on the Protected Property, including current stand-typing information (forest type-size-density classes), species, size classes, and products for the Protected Property as of the date of the Forest Management Plan or Forest Management Plan update;

iii. a representation of progress made toward reaching Milestones and the Mature Forest Goal.

(d) Term of the Forest Management Plan. Grantor must submit to the Holder at least every ten years an update to the Forest Management Plan prepared for Grantor as provided in Section VII.A.6(a) above, for the Holder's review as provided in Section VII.A.6(f) below. Nothing herein shall prohibit Grantor from submitting a new or updated Forest Management Plan more frequently than every ten years provided, however, that any revised Forest Management Plan submitted during the first ten years must be approved by the Holder. The Forest Management Plan must encompass the entire portion of the Protected Property owned by Grantor and is subject to the Holder's review pursuant to Section VII.A.6.f below.

(e) Property Transfer; Forest Management Plan adopted by a subsequent owner. In the event of a transfer of title of the Protected Property, a subsequent owner must adopt a Forest Management Plan. This may be done either: (1) with notice to the Holder, by adopting the prior owner's existing Forest Management Plan for the Protected Property and if so adopted, operating consistently with that plan, or (2) by submitting a new Forest Management Plan. Upon review of such new Forest Management Plan by the Holder pursuant to Section VII.A.6(f) below, such Forest Management Plan is considered adopted by the new owner, and that owner must operate within the constraints of such Forest Management Plan and in accordance with the terms of the Easement.

(f) Holder Review. Grantor must provide to the Holder any proposed Forest Management Plan or amendments to the Forest Management Plan. Within 45 days of receipt of the amended Plan, the Holder will provide written comments to Grantor identifying and explaining any portion of the Forest Management Plan that the Holder finds to be inconsistent with the terms of this Conservation Easement and that could result in a violation of this Conservation Easement. The Holder's review will only be based on whether the Plan contains all the required plan elements and is consistent with the terms of this Conservation Easement. If the Holder does not provide comments within 45 days, the proposed or amended Forest Management Plan shall be deemed adopted. Upon adoption, the Grantor shall ensure that all forest management activities are conducted in accordance with both the adopted Forest Management Plan and the terms of this Conservation Easement. The Parties acknowledge that the purpose of the Forest Management Plan is to guide management activities so that they are in compliance with this Conservation Easement, and that, barring a Force Majeure Event, the actual outcomes resulting from management activities on the Protected Property will determine compliance with this Conservation Easement. The Holder's right to provide comments or failure to exercise that right does not constitute a waiver of the terms of this Conservation Easement.

7. Maintenance of Boundaries. It is Grantor's responsibility to, at Grantor's cost and expense, locate and keep the boundaries of the Protected Property clearly marked on the ground. Notwithstanding the foregoing, Holder has the right, but not the obligation, to

maintain the boundaries of the Protected Property so that they are readily visible and identifiable. In the event of a suspected or material infringement or encroachment on the Protected Property, Grantor is solely responsible for establishing and re-establishing the boundary through flagging or blazing, or as necessary by surveying the boundary of the Protected Property affected by the suspected or material infringement and for an appropriate distance on either side of the affected area to prevent or abate unauthorized actions of a third party in violation of this Conservation Easement.

B. SUBDIVISION

1. **Limitation on Division.** The Protected Property shall remain in its current configuration without subdivision, partition, or other division into parcels or lots that results in the transfer or conveyance by deed, lease, or contract of any portion of the Protected Property into separate ownership or control from the remainder of the Protected Property. Notwithstanding the preceding, Grantor may subdivide, convey, and re-convey the Protected Property or any portion thereof solely for the purpose of allocating distinct parcels ("Tax Parcels") as part of an intra-company transfer, if all of the following conditions are met: (1) a Tax Parcel can only be conveyed to a parent, subsidiary, affiliate, or successor of the Grantor; (2) no Tax Parcel can be subsequently conveyed to any party that is not a parent, subsidiary, affiliate, or successor of the Grantor, unless all of the Protected Property is conveyed simultaneously to that same transferee; (3) all parcels comprising the Protected Property must be managed as a single unit with a single Forest Management Plan and Annual Report, and all terms of this Conservation Easement shall apply to all parcels as if they constituted a single, unified parcel of land; (4) all notices, consents, and approvals for all parcels comprising the Protected Property shall be sent to a single contact as provided herein under Section VIII.B; (5) such Tax Parcels may be held by no more than six (6) distinct legal entities at any one time; and (6) Grantor provides Holder 30 days written notice prior to the creation or conveyance of any Tax Parcel.

2. **Boundary Line Agreements.** Grantor may enter into boundary line agreements relating to the Protected Property to resolve bona fide boundary line disputes with the prior written approval of the Holder, which shall not be unreasonably withheld, provided that the total acreage of land protected under this Conservation Easement must not be reduced by a material amount as a result of any such agreement without court order. For purposes of this section, "bona fide boundary line dispute" means a dispute, disagreement, or discrepancy regarding the location of a boundary line between the Protected Property and an abutting parcel arising from inconsistencies in deed descriptions, surveys, historic use, or irregularities in boundary markers. Any land acquired by Grantor by virtue of such boundary line agreements will become subject to this Conservation Easement, unless Holder agrees otherwise, and any land conveyed to a third party by virtue of such boundary line agreements will, upon such conveyance, be deemed released from this Conservation Easement. Land acquired or conveyed to a third party by virtue of a boundary line agreement shall be memorialized by amendment to this Conservation Easement, which amendment shall update the Exhibit A Legal Description and attach a

new Exhibit B Survey Plan, which shall be a survey showing the area affected by the boundary line agreement.

3. **Certain Exception - Conveyances to State Agencies.** The fee interest in any portion of the Protected Property may be conveyed to the State of Maine for permanent conservation ownership, subject to the terms of this Conservation Easement. Such conveyance does not constitute a division, partition, subdivision or other legal or de facto creation of lots or parcels in separate ownership under this Section VII.B.

4. **Development Rights Extinguished.** Except as provided for by the terms of this Conservation Easement, all rights to develop or use the Protected Property that are expressly prohibited by this Conservation Easement are hereby extinguished, and as a result of such extinguishment, shall not be available for transfer to any other lands pursuant to a transferable development rights scheme or cluster development arrangement or otherwise. Neither the Protected Property nor any portion thereof may be included as part of the gross area of any other property not subject to this Conservation Easement for the purposes of determining density, lot coverage, or open space requirements under an otherwise applicable statute, regulation, or ordinance controlling land use and building density.

C. STRUCTURES

Existing buildings and structures on the Protected Property, as documented in the Baseline Documentation, may be maintained, repaired, or reconfigured, provided they remain within the same footprint, are not expanded, and are in accordance with applicable land use and building laws and regulations.

Except as provided below, no additional structures or towers of any kind, temporary or permanent, may be located on the Protected Property. Structures that are permitted include:

1. **Minor Non-Forestry/Recreational Structures.** Grantor reserves the right, but not the obligation, to install, maintain, replace, and relocate on the Protected Property minor, small scale structures to enhance the opportunity for, and management of, Non-Intensive Outdoor Recreation by the public, including, but not limited to: trail markers; small unlighted informational and interpretive signs; trail improvements such as steps, bog bridges, water bars, bridges to be used for recreational purposes, boardwalks, platforms, and railings; wells and springs for fresh water supply; small boat platforms, outhauls, and docks; primitive campsite facilities, fire rings, pit toilets, picnic tables, temporary tents for camping, and tent platforms; wildlife observation stations; study markers and grids; barriers or low fences to protect fragile areas and areas under active management or study; and gates or barriers to control unauthorized use or prevent or limit access by motor vehicles, provided that if Grantor erects any such permanent barriers or gates across roads and access points Grantor must notify Holder and post signs notifying members of the public that pedestrian access is permitted at the location of each barrier or gate, or allow the Holder to post such notice. Grantor must provide Holder with a key or code to be able to access the Protected Property as provided for in Section X.A.

2. **Forestry Structures and Improvements.** Grantor reserves the right to install, maintain, replace, and relocate on the Protected Property the following improvements and structures ("Forestry Structures and Improvements") necessary or appropriate to accomplish allowed Commercial Forest Management Activities, consistent with the Forest Management Plan:

   (a) minor improvements and structures including but not limited to gates, barriers, and boundary markers;

   (b) temporary structures and improvements, including, but not limited to, temporary equipment sheds, temporary sawmills, temporary office trailers and shelters for workers, portable privies, and additional similar types of temporary structures (for purposes of this section, "temporary" means that such structures are situated in a particular location for five years or less and are not thereafter situated or erected at that same location during a period of time which is one year from the date of removal of the same), but in no case shall a temporary structure include a permanent foundation; and

   (c) Land Management Roads, Winter Haul Roads, skid trails and roads or other logging trails, and associated bridges, drainage, and support structures in accordance with the Forest Management Plan and Section VII.A.6.

3. **Remedy for Adverse Conditions.** When Forestry Structures and Improvements cease to be used, as evidenced by the cessation of their use for a period of two (2) consecutive years and lack of maintenance, and such cessation of use and lack of maintenance results in an unsafe condition, a danger to human health, or a threat to the environment (an "adverse condition"), then Grantor must either remedy such adverse conditions, or remove such improvements, which may include burning or burying any decaying structures. If so removed, the site of such structures, improvements and utilities must be revegetated with native species and stabilized, all at Grantor's cost and expense. This does not apply to roads generally but does apply to road-stream crossing infrastructure.

4. **Notice.** Before commencing site preparation, construction, or relocation of any Land Management Roads or bridges (but specifically excluding routine maintenance, repair and replacement of existing roads and bridges for which no notice and/or approval are required) Grantor must notify Holder if such planned activities have not been previously described in the Forest Management Plan or Annual Report described in Section VII.A.6. Such notice and descriptions must, at a minimum, provide sufficient information to enable the State to determine whether the proposed activities are consistent with the terms of this Conservation Easement.

D. SURFACE ALTERATIONS

As of the date of this grant, there are no surface alterations on the Protected Property except for unpaved snowmobile trails, ATV trails, foot trails, skid trails, unpaved woods roads and timber

landing areas, and culverts and similar erosion control systems, gravel pits, and alterations associated with existing structures, all of which are described in the Baseline Documentation.

No additional filling, dumping, excavation, quarrying, mining, or other alteration may be made to the surface or subsurface of the Protected Property or to its surface or ground waters, or wetlands, except that Grantor reserves the following rights:

1. **Maintenance of Existing Surface Alterations.** Grantor reserves the right to maintain existing surface alterations described above in this Section VII.D, and the right to alter the surface to the extent reasonably necessary to exercise the rights conveyed or reserved in Sections VII.C ("Structures"), VII.E ("Forest and Vegetative Management"), and Section VII.F ("Access").

2. **Establishment of Trails, Roads, Parking Areas, and Certain Facilities.** Grantor reserves the right to construct, install, maintain, and relocate Land Management Roads, including culverts, bridges, other similar drainage and support structures and erosion control devices, Winter Haul Roads, gates, skid trails and skid roads, timber landing areas, and equipment and vehicle parking areas, associated with Grantor's Reserved Rights, including to support Commercial Forest Management Activities and Non-Intensive Outdoor Recreation on the Protected Property; provided that any such roads, parking areas, and water crossings shall abide by applicable local, state, and federal laws and regulations. The establishment of any new Land Management Roads or the relocation of existing Land Management Roads requires prior written approval from Holder. Grantor reserves the further right, but not the obligation, to establish and maintain, or allow others to establish and maintain, additional unpaved footpaths and recreational trails for Non-Intensive Outdoor Recreation, with notice to Holder, and provided that they are located and designed in a manner to prevent soil erosion and prevent damage to fragile plant communities and wildlife habitat.

   Public parking areas may be permitted subject to the prior written approval of the Holder, provided they are reasonably small and scaled to meet the intended use, unpaved, and consistent with the terms of this Conservation Easement.

   All such activity by Grantor must be conducted in a manner that is consistent with the Forest Management Plan and in compliance with any applicable statutory and regulatory requirements, Best Management Practices, and the terms of this Conservation Easement.

3. **Permitted Excavation and Use of Gravel, Sand, and Rock.**

   (a) Uses: Except where otherwise specifically prohibited or restricted by this Conservation Easement, Grantor reserves the right to excavate, remove, and use gravel, sand, and rock found on the Protected Property in connection with the following permitted activities (the "Permitted Excavation Activities"):

      (i) the exercise of Grantor's Reserved Rights on the Protected Property;

(ii) the construction of and maintenance of:

(aa) Land Management Roads, timber landings, and trails on the Protected Property;

(bb) Roads or trails providing public pedestrian and vehicular access, on, over, and across the Protected Property; and

(cc) Public parking areas as described above in VII.D.2.

(iii) the commercial sale of gravel, sand, and rock to any third party.

(iv) as may be provided to the Holder by Grantor, at Grantor's option, to support the Holder's rights herein.

(b) Standards: Grantor's Permitted Excavation Activities, including any reclamation undertaken following such activities, shall be conducted in accordance with the following standards:

(i) the exposed mineral surface of any new gravel, sand, or rock pit shall be limited to not more than ten (10) acres of exposed mineral surface per site at any time with not more than an aggregate of seventy (70) acres exposed at any one time, and a total aggregate area of mined acreage in perpetuity of one hundred fifty (150) acres for all Permitted Excavation Activities. For any existing pit larger than 10 acres that is identified in the Baseline Documentation, Grantor may continue extractions without changing the footprint of the pit. Changes to the footprint of any such pit must bring the resulting pit within the 10-acre limitation, but not expand further until such portions have been restored to bring the pit within 10 acres in size.

(ii) All Excavation Activities are prohibited within 330 feet of mapped perennial streams as depicted in Exhibit D. For existing pits in riparian buffers, there shall be no expansion of such pits.

(iii) Grantor shall take measures to prevent erosion and sedimentation from the Permitted Excavation Activities into all waterbodies, which measures may include ditches, sedimentation basins, dikes, dams, or such other control devices that are effective in preventing sediments from being eroded or deposited into such water body.

(iv) All excavation activities are prohibited below an elevation that is two (2) feet above the seasonal high groundwater level.

(v) No fuel, petroleum products, salt, or chemicals may be routinely stored in any gravel pit.

(vi) No equipment may be routinely fueled in any gravel pit.

(c) Reclamation of sites. All gravel, sand, and rock pits created or re-opened after the recording of this Conservation Easement shall be reclaimed and restored with native vegetation within two (2) years after Grantor determines that such pits are exhausted. Upon reclamation, such pits will no longer count toward the 70-acre aggregate cap of exposed acres at any one time identified in SectionVII.D.3(b)(i).

4. **Excavation for Research Purposes.** Grantor reserves the right, subject to prior notice to the Holder, to permit limited excavation of the surface of the Protected Property for ecological, educational, scientific research, or cultural or archeological investigation conducted under then generally accepted professional standards that will not adversely impact the Conservation Values of the Protected Property. Excavation permitted by this Section VII.D.4 must not exceed one (1) acre in the aggregate exposed at any one time, without the prior written approval of the Holder.

E. FOREST AND VEGETATIVE MANAGEMENT

As of the date of this grant, the Protected Property remains largely undeveloped and predominantly forested. Silvicultural practices on the Protected Property must prioritize the conservation of Mature Forest habitat within a dynamic landscape that includes forests at various stages of growth, age, and composition. These practices shall, as set forth in the Forest Management Plan, ensure achievement of the Mature Forest Goal, enhance habitat connectivity, and establish permanent wildlife travel corridors along riparian areas.

Grantor reserves the right to manage vegetation on the Protected Property for commercial and non-commercial purposes in a manner that ensures achievement of the Mature Forest Goal. All such management must be in accordance with the Forest Management Plan.

1. **Vegetation Management for Commercial Forestry Purposes.** Grantor reserves the right to manage the vegetation on the Protected Property in accordance with the Forest Management Plan and as set forth below in this Section VII.E.1.

   Vegetation management on the Protected Property should encourage a full range of site adapted native species and be consistent with the Conservation Purposes of the Conservation Easement. Existing Plantations are shown on Exhibit E and described in the Forest Management Plan and may be counted as Mature Forest. New Plantations may be created up to a total aggregate of 4,000 acres total in Plantations at any one time, but such new Plantations may not count as Mature Forest. Grantor shall consult with Holder in advance of establishing new Plantations utilizing any species that are not native to the State of Maine or the Acadian forest; provided that in no event shall Grantor utilize in Plantations any non-native species identified on the list of Regulated Invasive Terrestrial Plant Species developed by the Department of Agriculture, Conservation and Forestry, as currently set out at Chapter 273 and may be later amended.

(a) Waiver in Specific Circumstances. Grantor and the Holder agree that in the event of a hurricane, fire, flood, drought, or similar event or if an insect, disease, or forest health pest outbreak occurs and sanitation or salvage harvests are necessary to prevent the outbreak from spreading to adjacent stands then the restrictions in this Section VII.E.1 may be temporarily waived with the prior written approval of the Holder.

(b) Supervision of Timber Harvesting. Timber harvesting on the Protected Property must be supervised by a professional forester licensed in the State of Maine.

(c) Grantor's Reporting Obligations.

(i) From time to time or upon request, Grantor will make best efforts to provide to the Holder copies of Forest Operations Notifications and other notifications regarding harvest locations, harvest activities, and related information (and all amendments, modifications changes, and supplements thereto) applicable to the Protected Property (the "Harvest Notifications") simultaneously with Grantor's transmittal of the same to the State of Maine, Department of Agriculture, Conservation and Forest, Bureau of Forestry (a/k/a the Maine Forest Service) or successor agency.

(ii) Grantor must provide the Holder with a written annual report that accurately describes the forestry and other activities on the Protected Property during the preceding year, including harvest locations ("Annual Report"). Grantor must also describe in the Annual Report the estimated location, silvicultural objectives, and timing of all forestry operations and other activities planned for the coming year, including planned skid trail crossings. In the report, Grantor must also demonstrate the consistency of such completed and anticipated forestry activities with the Forest Management Plan.

(iii) Grantor must provide the Holder with reasonable opportunity to meet with Grantor and its supervising licensed professional forester at least annually to review the Annual Report.

2. **Vegetation Management to support Non-Intensive Outdoor Recreation and Affirmative Rights Conveyed to the State.** Grantor has the right, but not the obligation, to manage vegetation by cutting, pruning, and planting as necessary to accommodate Non-Intensive Outdoor Recreation in accordance with the Forest Management Plan and as set forth in Section VII.F. Such vegetation management may include the minimal removal of vegetation for safety purposes and for the creation of scenic vistas and views from trails, public roadways, campsites, overlooks, and other public vantage points; provided that all such vegetation management must be conducted in a manner that does not adversely impact the Conservation Values and scenic character of the Protected Property; and further provided that no new openings or clearings in the forest greater than one-half (1/2) acre are permitted for such purposes without the prior written approval of the Holder.

3. **Incidental Operations.** Small-scale commercial or industrial operations incidental to and compatible or in connection with activities and uses expressly permitted under this Conservation Easement, such as commercial guiding, hunting bear over bait, and similar commercial recreational ventures, are allowed on the Protected Property. Subject to Holder's prior written approval, the processing and sale of products produced on the Protected Property incidental to and compatible or in connection with activities and uses permitted under this Conservation Easement are allowed on the Protected Property.

F. ACCESS

1. **Non-Motorized Public Access On and Across the Protected Property.** Grantor must permit public access on and across the Protected Property for Non-Intensive Outdoor Recreation in accordance with this section.

   Grantor agrees to take no actions to prohibit or discourage non-motorized access by the public on or over the Protected Property for Non-Intensive Outdoor Recreation, subject to reasonable rules and regulations as provided in Section VII.F.3 and the Forest Management Plan.

2. **Fees.** Neither Holder nor Grantor may charge the public fees for access to or use of the Protected Property for Non-Intensive Outdoor Recreation. Under no circumstances may Grantor retain or allow exclusive use of the Protected Property to any person or entity for recreational purposes.

3. **Rules and Regulations.** Grantor may make reasonable rules and regulations for managing or prohibiting any of the following uses for Non-Intensive Outdoor Recreation: night use; camping; noise-generating activities; open fires; use of motor vehicles; paid guides, outfitters, or services; access by domesticated animals or pets; bear baiting or hunting with dogs; any use that may interfere with or be harmful to members of the public using the Protected Property, adversely impact the Conservation Values of the Protected Property, or the proper exercise of Grantor's reserved rights. Grantor also has the right to temporarily restrict public access on limited areas of the Protected Property, and to relocate designated trails, to protect fragile areas under study, or for safety purposes during Commercial Forestry Management Activities, or during other permitted management activities that may pose a hazard to recreational users or to ensure safety, to permit necessary maintenance, or to preserve scenic, ecological, or other Conservation Values of the Protected Property. Grantor shall make best efforts to provide prompt written notice to Holder for any restrictions to public access guaranteed under this easement where such restrictions either: a) are anticipated to last for more than one season; or b) will or may significantly affect Non-Intensive Outdoor Recreation (e.g., mainline road closures, trail access) or Holder's rights of monitoring and enforcement.

4. **Recreational Use Statute.** Nothing in this Conservation Easement shall be interpreted as an assumption of responsibility by, or basis for liability on the part of, Grantor or Holder for any injury to person or damage to property or loss of life that may be sustained by any person as a result of any entry on or use of the Protected Property, nor

shall anything in this Easement be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A. Grantor and Holder specifically claim and retain all the protections, rights, defenses, and immunities provided under Maine law to owners, lessees, managers, holders of an easement, or occupants of land, including the protections contained in 14 M.R.S. § 159-A.

5. **Rights Granted and Reserved.** Nothing in this Conservation Easement shall be construed to preclude Grantor's right to grant licenses for management, or additional access on, over, or across the Protected Property for Non-Intensive Outdoor Recreation by the public, and for motorized or mechanized use by the public, subject to the prior written approval of the Holder, provided such licenses are consistent with the Conservation Purposes of this Conservation Easement and do not adversely impact the Conservation Values of the Protected Property.

   Additionally, nothing in this Conservation Easement shall prevent or limit access by Grantor or Holder across the Protected Property by motor vehicles over existing or approved forest roads for monitoring, management, or emergency purposes.

VIII. NOTICES, CONSENTS, AND APPROVALS

A. **Notices, Consents, and Approvals Provided to Holder.** Any notices, consents, or approvals provided to the Holder required by this Conservation Easement must be in writing and must be personally delivered or sent by registered or certified mail, or other courier providing reliable proof of delivery, to the following person and address, or such other person or address as may be hereafter specified:

   Director, Bureau of Parks and Lands
   22 State House Station
   Augusta, Maine 04333-0022

   With a copy to

   Office of Attorney General
   Natural Resources Division
   6 State House Station
   Augusta, ME 04333

   All other communication must be made by reasonable means under the circumstances. Notices to Holder or Holder's consent must include, at a minimum, sufficient information to enable Holder to determine whether proposed plans are consistent with the terms of this Conservation Easement.

B. **Notices, Consents and Approvals Provided to Grantor.** Any notices, consents, or approvals provided to Grantor required by this Conservation Easement must be sent by registered or certified mail, or other courier providing reliable proof of delivery, to

Grantor's designee at the following address, or to such other person or address as may be hereafter specified:

_____
_____
_____

With a copy to
_____
_____
_____

All other communication must be made by reasonable means under the circumstances. Such notices to Grantor or requests for Grantor consent, required or contemplated hereunder, must include, at a minimum, sufficient information to enable Grantor to determine whether the matter disclosed in the notice or the matter as to which consent is requested is consistent with the terms of this Conservation Easement.

C. **Other Reasonable Methods of Communication.** Notwithstanding the foregoing, as an alternative to delivery by registered or certified mail or other courier as provided above, notices, consents, and approvals may be delivered by other reasonable methods, such as email communications, as mutually agreed upon in advance, in writing, by Holder and Grantor. Documents with original signatures shall be provided upon the request of either party.

D. **Designation of Agent for Grantor in Certain Cases.** In the event that the Protected Property is owned by a trust, business entity, or any common or jointly held ownership, such grantor entity, or the common or joint owners, must designate an agent to be responsible for the granting of approvals of Grantor and the receipt of notices on behalf of Grantor. If no single owner or agent is so designated, the approval of or notice to, any executive officer of the business entity, or any one common or joint owner, is deemed the approval of or notice to all.

IX. COSTS AND LIABILITIES

A. **Payment of Taxes and Discharge of Liens by Grantor.** Grantor must pay and discharge when due all property taxes and assessments imposed upon the Protected Property and any uses thereof, and, subject to Section XII.G, avoid the imposition of any liens resulting from the actions of Grantor, its contractors and agents, which may impact Holder's rights hereunder. Subject to Section XII.G, Grantor must keep the Protected Property free of any liens or encumbrances, including without limitation those arising out of any work performed for, materials furnished to, or obligations incurred by Grantor. Holder must not incur any liens or encumbrances against the Protected Property, including, without limitation, those arising out of any work performed for, materials furnished to, or obligations incurred by Holder.

B. No Possessory Rights. Except as provided in Section VII, Grantor acknowledges that Holder has no possessory rights in the Protected Property, nor any responsibility or right to control, maintain, or keep up the Protected Property. Grantor shall retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Protected Property.

C. Limitation on Obligations of Holder. Grantor is responsible for, and Holder shall have no responsibility whatsoever for, the operation of the Property, or the monitoring of hazardous and other conditions thereon, unless expressly undertaken by separate written agreement. Notwithstanding any other provision of this Conservation Easement to the contrary, this Conservation Easement shall not be construed such that: (1) it creates in Holder the obligations or liabilities of an "owner" or "operator" as those words are defined and used in the environmental laws, including without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 United States Code, Sections 9601 *et seq.*) or any successor or related law; (2) it creates in Holder's obligations or liabilities of a person described in 42 United States Code Section 9607(a)(3) or any successor or related law; or (3) Holder has any control over Grantor's ability to investigate and remediate any hazardous materials associated with the Protected Property. The term "environmental laws" includes, without limitation, any federal, state, local, or administrative agency statute, regulation, rule, ordinance, order, or requirement relating to environmental conditions or hazardous substances.

X. HOLDER'S AFFIRMATIVE RIGHTS

In addition to the public access rights granted to Holder's in Section VII.F ("Access") and in Section VII.A.8 ("Maintenance of Boundaries") herein, Holder has the following additional rights:

A. Holder's Right of Entry. In a reasonable manner, Holder has the right to enter the Protected Property, including over roads owned by Grantor or rights of way or other access ways available to Grantor for access to the Protected Property, for inspection, monitoring, and enforcement purposes (see Exhibits B and C).

B. Enforcement. Holder has the right to enforce this Conservation Easement by proceedings at law and in equity, including, without limitation, the right to require the restoration of the Protected Property to a condition in compliance herewith and receive damages for irremediable harm due to violation hereof. If Holder becomes aware of a violation or threatened violation of the terms of this Conservation Easement, then Holder must give written notice to Grantor and request that Grantor take corrective action sufficient to cure the violation or prevent the threatened violation, except where emergency circumstances or prevention of a threatened breach of this Conservation Easement require more immediate enforcement action. Wherever in this Conservation Easement Grantor is afforded or retains a right to provide a plan or otherwise express an intention to take an action (regardless of whether Holder has any right to approve same), nothing in this Conservation Easement may be construed to impair Holder's right to seek

injunctive or other relief as necessary to enforce the terms of this Conservation Easement against a violation or threatened violation hereof.

If a court determines that this Conservation Easement has been or is likely to be breached, Grantor will reimburse Holder for any reasonable costs of enforcement, including court costs, reasonable attorney's fees, and any other payments ordered by such court. Nothing contained in this Conservation Easement may be construed to preclude Grantor's or Holder's rights to recover damages from any third party for trespass or other violation of their respective rights in this Conservation Easement and the Protected Property.

C. Violations by Third Parties. Holder may not bring an enforcement action against Grantor for injury to or change in the Protected Property resulting from the actions of a third party trespasser or any person who has been permitted on the Protected Property by Holder pursuant to this Easement; resulting from natural causes or environmental catastrophe beyond Grantor's control, such as insect infestation, fire, flood, storm, and earth movement; or from any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Protected Property resulting from such causes. Grantor must take all reasonable actions, consistent with customary standards for the management of comparable areas used for the same purposes as the Protected Property, to prevent or halt third parties from violating this Conservation Easement; such reasonable actions shall include informing Holder of such violations and requesting that Holder take appropriate enforcement action. Grantor and Holder, together or unilaterally, may take such action as may be reasonably necessary to remedy acts of authorized or unauthorized third parties that constitute a violation of this Conservation Easement. Furthermore, in the event of violations of this Conservation Easement caused by acts of third parties, at Holder's option, Grantor agrees to join in any suit for the purposes of pursuing enforcement action. Grantor shall remain responsible for violations of this Conservation Easement caused by acts of Grantor's employees, contractors, agents, invitees, guests, licensees, and other expressly or impliedly authorized third parties. As to violations arising from the acts or omissions of unauthorized third parties, Holder, together or unilaterally, shall have a right to enforce this Conservation Easement directly against Grantor if Grantor fails to cooperate with Holder in all reasonable respects to halt or abate the violation resulting from such acts or omissions, or fails to promptly report a known or suspected violation to Holder.

D. Signs Identifying Holder. Holder has the right, after consultation with Grantor, to install and maintain small unlighted signs visible from public vantage points, to identify the Holder and inform the public and abutting property owners that the Protected Property is under the protection of this grant.

E. Third Party Enforcement Rights. Pursuant to the Order, MDEP shall have all of the enforcement rights granted to Holder pursuant to this Section X, and shall act as a third party enforcer of this Conservation Easement.

XI. CONSERVATION EASEMENT REQUIREMENTS UNDER STATE AND FEDERAL LAWS AND REGULATIONS

A. Conservation Purposes. This Conservation Easement is established exclusively for conservation purposes consistent with the provisions of the Internal Revenue Code, as amended at Title 26, U.S.C. Section 170(h)(1-6) and Sections 2031(c), 2055, and 2522, and under Treasury Regulations at Title 26 C.F.R. §1.170A-14 *et seq.*, as amended.

B. Alternative Qualified Holder. Holder is qualified to hold conservation easements pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3).

C. Assignment Limitation. The burden of the Conservation Easement created hereby shall run with the Protected Property and is enforceable against all future owners in perpetuity. The benefits of this Conservation Easement are not appurtenant to any particular parcel of land but are in gross.

This Conservation Easement may be transferred or assigned only to a qualified holder pursuant to 33 M.R.S. § 476(2) and under Internal Revenue Code Section 170(h)(3) that is willing and able to hold this Conservation Easement for the Conservation Purposes and expressly agrees to assume the responsibility imposed on by the terms of this Conservation Easement. Any such assignee or transferee has the like power of assignment or transfer; provided, however, that any such further transfer or assignment is subject to the prior written approval of the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto). If the then-current Holder of this Conservation Easement ever ceases to exist or fails to carry out the responsibility imposed on the Holder by the terms of this Conservation Easement, then the State of Maine, acting by and through its Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands (or the successor State agency thereto), in consultation with Grantor, will identify and select an appropriate entity to which this Conservation Easement may be transferred. Any assignment or transfer of responsibility for the Conservation Easement must be in a recordable form and must be recorded in the Somerset County Registry of Deeds.

D. Termination and Proceeds. This Conservation Easement may only be extinguished or terminated by judicial order in a court of competent jurisdiction. It is the intention of the parties that any extinguishment or termination be approved by a court only if all of the Conservation Purposes of this Conservation Easement are impossible to accomplish, and if Grantor, Holder, and MDEP agree.

Grantor and Holder agree that the grant of this Conservation Easement gives rise to a property right which vests immediately in Holder and which has a fair market value equal to the amount by which the fair market value of the Protected Property immediately before the imposition of this Conservation Easement is reduced by the restrictions imposed by this Conservation Easement, as of the date of the execution of this Conservation Easement (the Original Percentage Reduction).

If either Holder or Grantor receive notice of the actual or threatened exercise of the power of eminent domain (hereinafter a "Taking") with respect to any interest in or any part of the Protected Property, the party who receives the notice shall promptly notify the other and the parties may proceed jointly or either party may at its discretion take such legal action as it deems necessary to: (i) challenge the Taking; (ii) challenge the amount of allocation of any award tendered by the Taking authority; or (iii) otherwise participate in, challenge, or appeal such proceedings, findings, or awards. Any third party counsel and consultants (including appraisers) hired by either party shall be reasonably acceptable to the other party. Each party shall be responsible for its own costs and legal fees, absent written agreement of the parties.

Should this Conservation Easement be terminated or extinguished as provided in this Section XI.D, in whole or in part, Holder shall be entitled to be paid no less than a portion of any proceeds of sale, exchange, or lease computed as to the greater of (i) the Original Percentage Reduction as required under U.S. Treasury Regulations at 1.170-A-14(g)(6)(ii); or (ii) the increase in value of the Grantor's property interest resulting from such extinguishment, as determined by the court, or in the absence of such court determination, by the agreement of the parties or, in the absence of such agreement, by an independent appraiser mutually selected by Grantors and Holder. Holder shall use its share of the proceeds or other moneys received under this paragraph in a manner consistent, as nearly as possible, with the stated, publicly beneficial Conservation Purposes of this Conservation Easement.

E. <u>Amendment</u>. This instrument sets forth the entire agreement of the parties with respect to this Conservation Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Easement. Holder and Grantor, with the approval of MDEP, may amend this Conservation Easement to enhance the Conservation Values of the Protected Property or add to the restricted property, provided that no amendment shall (i) affect this Conservation Easement's perpetual duration, (ii) conflict with or be contrary to or inconsistent with the Conservation Purposes of this Conservation Easement, (iii) reduce the protection of the Conservation Values of the Protected Property, (iv) affect the qualification of this Conservation Easement as an "interest in land" or (v) affect the status of Holder as a "qualified organization." No amendment shall be effective unless the amendment complies with 33 M.R.S. § 477-A and is documented in a notarized writing executed by Holder, Grantor, and MDEP and is recorded among the land records of the County or Counties in which the Protected Property is located.

XII. GENERAL PROVISIONS

A. <u>Applicable Law</u>. This Conservation Easement is created pursuant to Maine's Conservation Easement statute 33 M.R.S. §§ 476 – 479-C, inclusive, as amended, and must be construed in accordance with the laws of the State of Maine and in accordance with the Conservation Plan.

B. Interpretation. If uncertainty should arise in the interpretation of this Conservation Easement, judgment should be made in favor of accomplishing the Conservation Purposes. Nothing in this Conservation Easement should be construed to permit any activity otherwise prohibited by law, nor to prohibit the imposition of further land use restrictions by agreement of the parties (provided that such further land use restrictions shall be consistent with the Conservation Purposes) or by operation of law.

C. Non-Waiver. The failure or delay of Holder, for any reason whatsoever, to discover a violation or initiate an action to enforce this Conservation Easement does not constitute laches, a waiver, or estoppel of its rights to do so at a later time. No act or failure to act by or on behalf of Holder, including failure to provide notice of a violation in accordance with Section X ("Holder's Affirmative Rights"), may be construed to constitute an approval, waiver, or estoppel in connection with Holder's rights to enforce the terms of this Conservation Easement.

D. Compliance. A party's obligation as Grantor, or successor owner of the Protected Property, will cease, if and when such person or entity ceases to have any present, partial, contingent, collateral, or future interest in the Protected Property, but only to the extent that the Protected Property is then in compliance with this Conservation Easement.

Responsibility of Grantor for breaches of this Conservation Easement that occur prior to transfer of title will survive such transfer; provided that the new owner shall also be responsible for bringing the Protected Property into compliance unless Holder releases the new owner. In certifying Grantor's compliance with the Forest Management Plan, the State may request, at Grantor's cost, current stand-typing information (forest type-size-density classes) and information on timber harvest levels by species group that has occurred since the date of the then-current Forest Management Plan. At Grantor's cost, Holder will provide certificates to third parties, indicating the extent to which, to Holder's knowledge, there is compliance of the Protected Property with the terms of this Conservation Easement or compliance on the part of Grantor with any obligation hereunder. Such certificate shall be delivered within thirty (30) days of Grantor's request and shall speak to the condition of the Protected Property as of the Holder's most recent inspection. If Grantor requests the certificate to be as of a more recent inspection date, the Holder shall conduct an inspection within forty-five (45) days of receipt of Grantor's written request thereof, which shall be at Grantor's cost.

E. Severability. If any provision of this Conservation Easement or the application of any provision to a particular person or circumstance is found to be invalid, the remainder of this Conservation Easement and the application of such provision to any other person or in any other circumstance remain valid.

F. Standard for Holder Granting Discretionary Consent and Providing Prior Written Approval. Grantor and Holder acknowledge that, in view of the perpetual nature of this Conservation Easement, they are unable to foresee all potential future land uses, future technologies and future evolution of the land and other natural resources, and other future occurrences affecting the Conservation Purposes. Holder may determine whether (a)

proposed uses or proposed improvements not contemplated by or addressed in this Conservation Easement or (b) alterations in existing uses or structures, are consistent with the Conservation Purposes. To make such determinations and when otherwise determining whether to provide its prior written approval when required by this Easement, the following standard applies: Holder may grant discretionary consent or provide prior written approval only if Holder has determined in its reasonable discretion that the proposed use is consistent with the Conservation Purposes, substantially conforms to the intent of this grant, meets any applicable conditions expressly stated herein, is consistent with the Conservation Plan, and does not result in a material, adverse impact on the Conservation Values of the Protected Property. Holder has no right or power to consent to any use that would result in building development on the Protected Property other than that which is expressly allowed herein, or that would be inconsistent with the Conservation Purposes or limit the term or terminate this Conservation Easement, or that would impair the qualification of this Conservation Easement or the status of Holder under any applicable laws, including 33 M.R.S. §§ 476 *et seq.*, and Section 170(h) or 501(c)(3) of the Internal Revenue Code, or successor provisions thereof.

G. Liens Subordinated. Grantor represents that as of the date of this grant there are no liens or mortgages outstanding against the Protected Property, except as listed in Exhibit A, and that such liens are subordinated to Holder's rights under this Conservation Easement. Grantor has the right to use the Protected Property as collateral to secure the repayment of debt, provided that any lien or other rights granted for such purpose are subordinate to Holder's rights under this Conservation Easement. Grantor must provide documentation of such subordination to Holder. Under no circumstances may Holder's rights be extinguished or otherwise affected by the recording, foreclosure, or any other action taken concerning any lien or other interest in the Protected Property.

H. Protections, Rights, and Immunities. Nothing in this Conservation Easement shall be construed to limit, reduce, or waive any of Grantor's or Holder's protections, rights, or immunities under 14 M.R.S. § 159-A (Maine's recreational use statute), 14 M.R.S. §§ 8101-8118 (the Maine Tort Claims Act), or any other applicable provision of law or equity. Holder specifically claims and retains all such protections, rights, and immunities.

I. Standing to Enforce. Nothing herein should be construed to grant the public standing to bring an action hereunder, nor any rights in the Protected Property by adverse possession or otherwise, provided that nothing in this Easement shall affect any existing public rights in or to the Protected Property acquired by common law, adverse possession, prescription or other law, independently of this grant. Nothing in this Section XII.I shall limit the third-party enforcement rights provided to MDEP pursuant to Section X.E.

J. Holder's Ability to Exercise Rights. The parties acknowledge that the ability of Holder to exercise the rights or carry out the duties of Holder hereunder, including, without limitation, the installation, operation, and maintenance of any recreational improvements on the Protected Property, are subject to the availability of moneys appropriated or otherwise available to Holder and designated for such purposes. Nothing in this

Conservation Easement creates any obligation on behalf of Holder in excess of such availability of moneys appropriated or otherwise available to Holder.

K. Certain Rights Preserved. Without limiting Grantor's rights to prohibit third parties from engaging in activities that may result in claims adverse to Grantor's interest in the Property, and without acknowledging the validity of such claims of third parties that may exist now or in the future, this Conservation Easement shall not impair any existing prescriptive right in the Property that may have been acquired by the public or Holder prior to the date of this Conservation Easement, or any other right the public or Holder may have to use or access the Protected Property pursuant to law.

L. Subsequent Transfers.

(a) Sale Subject to Conservation Easement. Except as specifically provided herein, nothing in this Conservation Easement shall be construed to prevent Grantor from selling or otherwise conveying or transferring the Protected Property to a third party, subject to the terms of this Conservation Easement.

(b) Incorporation of Conservation Easement Terms. Grantor must incorporate the terms of this Conservation Easement by reference in any deed or other legal instrument by which Grantor divests itself of the Protected Property. Further, Grantor must notify Holder of the transfer of the Protected Property at least thirty (30) days prior to the date of such transfer. Grantor must provide a complete copy of this Conservation Easement to any transferee of any rights in the Protected Property before any such transfer and must provide Holder with a copy of any transfer documentation upon completion of such transfer. The failure of Grantor to perform any act required by this paragraph shall not impair the validity of this Conservation Easement or limit its enforceability in any way.

Notwithstanding anything to the contrary herein, the conveyance of the Protected Property includes all appurtenant rights associated with the Protected Property, including any and all rights of access thereto. In addition, upon conveyance of all or any portion of the Protected Property, consistent with the requirements in Section VII.B.1, Grantor may reserve rights of access across the lands so conveyed or other rights and easements for the benefit of Grantor's retained lands.

[signatures on the following pages]

XIII. HABENDUM AND SIGNATURES

TO HAVE AND TO HOLD the said Conservation Easement unto the said Holder and their successors and assigns forever.

IN WITNESS WHEREOF, _____ has caused this Conservation Easement to be executed by its duly authorized representative as of this ___ day of _____, 2025.

Signed, sealed and delivered
in the presence of: _____

_____ By: _____
Name:
Its:
Hereunto duly authorized

State of Maine
County of _____, ss. _____ ____, 2025

Personally appeared the above named _____, in his capacity as the _____ of _____ and acknowledged the foregoing instrument to be his free act and deed in his said capacity, on behalf of said _____.

Before me,

_____
Notary Public/Maine Attorney-at-Law
Name: _____

XIV. ACCEPTANCE BY STATE

Pursuant to 12 M.R.S. § 1850(1) & 33 M.R.S. § 477(2), Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, hereby accepts this Conservation Easement on behalf of the STATE OF MAINE.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE, Bureau of Parks and Lands
Department of Agriculture, Conservation and Forestry

By: _____
Andrew R. Cutko
Its Director, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Andrew R. Cutko, Director of the Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

Pursuant to 33 M.R.S. § 477(2) and 38 M.R.S. § _____, Melanie Loyzim, Commissioner of the Department of Environmental Protection, hereby accepts the third-party enforcement rights contained in this Conservation Easement on behalf of the Department of Environmental Protection.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered **Department of Environmental Protection**

By: _____
Melanie Loyzim
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Melanie Loyzim, Commissioner of the Department of Environmental Protection and acknowledged acceptance of the above and foregoing instrument to be her free act and deed in her said capacity, and the free act and deed of the Department of Environmental Protection.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XV. CONSENT OF COMMISSIONER

Pursuant to 12 M.R.S. § 1850(1), the Commissioner of the Department of Agriculture, Conservation and Forestry, hereby gives consent to acquisition by the STATE OF MAINE, Department of Agriculture, Conservation and Forestry, Bureau of Parks and Lands, of the above and foregoing Conservation Easement.

Executed this _____ day of _____, 2025.

Signed Sealed & Delivered

STATE OF MAINE
Department of Agriculture, Conservation and Forestry

By: _____
Amanda E. Beal
Its Commissioner, Duly Authorized

in the Presence of:

_____

STATE OF MAINE
COUNTY OF KENNEBEC. Date:

Personally appeared the above-named Amanda E. Beal, Commissioner of the Department of Agriculture, Conservation and Forestry, and acknowledged acceptance of the above and foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of the STATE OF MAINE.

Before me,

_____
Name:
Notary Public/Attorney-at-Law

XVII. ATTACHMENTS TO CONSERVATION EASEMENT

EXHIBIT A – Legal Description of the Protected Property

EXHIBIT B – Survey Plan of the Protected Property

EXHIBIT C – Map of Roads and Trails

EXHIBIT D – Map of Wetlands and Streams

EXHIBIT E – Existing Plantations located on the Protected Property

Exhibit A

Legal Description of the Protected Property

EXHIBIT A

NOTE: As used herein "recorded" shall mean recorded with the Somerset County Registry of Deeds.

BRADSTREET TOWNSHIP (T4 R7 BKP WKR)

The land situated in Bradstreet Township (T4 R7 BKP WKR), County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C. dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2489, Page 228.

EXCEPTING THEREFROM:

1. The land conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to State of Maine Department of Conservation Bureau of Parks and Lands dated September 22, 2009, and recorded in Book 4195, Page 167.

2. The land conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to The Nature Conservancy dated September 22, 2009, and recorded in Book 4195, Page 206, but EXCEPTING THEREFROM the land conveyed by deed of The Nature Conservancy to Plum Creek Maine Timberlands, L.L.C. dated June 26, 2015, and recorded in Book 4923, Page 266.

3. The "Protected Property" described in Conservation Easement from The Nature Conservancy to Forest Society of Maine dated July 22, 2011, and recorded in Book 4422, Page 245, as affected by Agreement Concerning Boundary Line between The Nature Conservancy and Plum Creek Maine Timberlands, L.L.C. dated January 30, 2012, and recorded in Book 4529, Page 265, as further affected by Amended and Restated Agreement Concerning Boundary Line between The Nature Conservancy, Plum Creek Maine Timberlands, L.L.C., and Forest Society of Maine dated January 21, 2014, and recorded in Book 4755, Page 159.

4. The land conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 211, together with all the land lying southerly of the land described in said deed.

5. To the extent not excepted by the above, all the land lying westerly and southerly of a line which is 33 feet westerly and southerly of the centerline of the southerly fork of the Mining Road, so-called.

PARLIN POND TOWNSHIP (T3 R7 BKP WKR)

The land situated in Parlin Pond Township (T3 R7 BKP WKR), County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C.

dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2490, Page 228.

EXCEPTING THEREFROM:

1. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Summerhaven Properties, Inc. dated September 6, 2001, and recorded in Book 2853, Page 101.

2. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Summerhaven Properties, Inc. and Moose Tracks, L.L.C. dated July 10, 2002, and recorded in Book 2997, Page 196.

3. The "Protected Property" described in Moosehead Region Conservation Easement granted by Plum Creek Maine Timberlands, L.L.C. to Forest Society of Maine and the State of Maine dated May 14, 2012, and recorded in Book 4523, Page 222.

4. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to the State of Maine dated March 10, 2016, and recorded in Book 5011, Page 1, and as corrected and rerecorded in Book 5012, Page 292. (Cold Stream)

5. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 224.

6. The property conveyed by deed of Weyerhaeuser Company to Anthony C. George and Catherine M. George dated May 18, 2021, and recorded in Book 5715, Page 293.

7. The property conveyed by deed of Weyerhaeuser Company to the State of Maine dated April 15, 2021, and recorded in Book 5728, Page 182.

<u>JOHNSON MOUNTAIN TOWNSHIP (T2 R6 BKP WKR)</u>

The land situated in Johnson Mountain Township (T2 R6 BKP WKR), County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C. dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2490, Page 81, as affected by Corrective and Confirmatory Quitclaim Deed Without Covenant from S.D. Warren Company to Plum Creek Maine Timberlands, L.L.C. dated July 25, 2014, and recorded in the Somerset County Registry of Deeds in Book 4814, Page 137.

ALSO EXCEPTING THEREFROM:

1. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Plum Creek Maine Marketing, Inc. dated July 1, 1999, and recorded in Book 2573, Page 191. (Marshall Yard Complex)

2. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Plum Creek Land Company dated June 23, 1999, and recorded in Book 2570, Page 142, and as corrected by Correction Deed dated June 13, 2000, and recorded in Book 2694, Page 351.

3. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Summerhaven Properties, Inc. dated September 6, 2001, and recorded in Book 2853, Page 101.

4. The "Protected Property" described in Moosehead Region Conservation Easement granted by Plum Creek Maine Timberlands, L.L.C. to Forest Society of Maine and the State of Maine dated May 14, 2012, and recorded in Book 4523, Page 222.

5. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to the State of Maine dated March 10, 2016, and recorded in Book 5011, Page 1, and as corrected and rerecorded in Book 5012, Page 292. (Cold Stream)

6. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 230.

WEST FORKS PLANTATION

The land situated in West Forks, County of Somerset, and State of Maine, conveyed by that certain deed from S. D. Warren Company to SDW Timber II, L.L.C. dated November 5, 1998, and recorded in the Somerset County Registry of Deeds in Book 2491, Page 67.

EXCEPTING THEREFROM:

1. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to Plum Creek Land Company dated June 23, 1999, and recorded in Book 2570, Page 148, and as corrected by Correction Deed dated June 13, 2000, and recorded in Book 2694, Page 343, and as further corrected by Correction Deed dated October 31, 2000, and recorded in Book 2734, Page 308.

2. The land leased to Maine RSA#1, Inc. under a lease evidenced by Memorandum of Lease dated June 18, 2010, and recorded in Book 4292, Page 203, as affected by Corrective Memorandum of Lease dated January 9, 2015, and recorded in Book 4900, Page 142. (Cell Tower Site)

3. The "Protected Property" described in Moosehead Region Conservation Easement granted by Plum Creek Maine Timberlands, L.L.C. to Forest Society of Maine and the State of Maine dated May 14, 2012, and recorded in Book 4523, Page 222.

4. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to William Lyons dated March 11, 2015, and recorded in Book 4890, Page 62.

5. The property conveyed by deed of Plum Creek Maine Timberlands, L.L.C. to the State of Maine dated March 10, 2016, and recorded in Book 5011, Page 1, and as corrected and rerecorded in Book 5012, Page 292. (Cold Stream)

6. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2016, and recorded in Book 5099, Page 255.

7. The property conveyed by deed of Weyerhaeuser Company to Central Maine Power Company dated November 14, 2019, and recorded in Book 5496, Page 134.

8. The property conveyed by deed of Weyerhaeuser Company to Richard E. Bellerose dated May 11, 2021, and recorded in Book 5714, Page 145.

Exhibit B

Survey Plan of the Protected Property

Exhibit C

Map of Roads and Trails

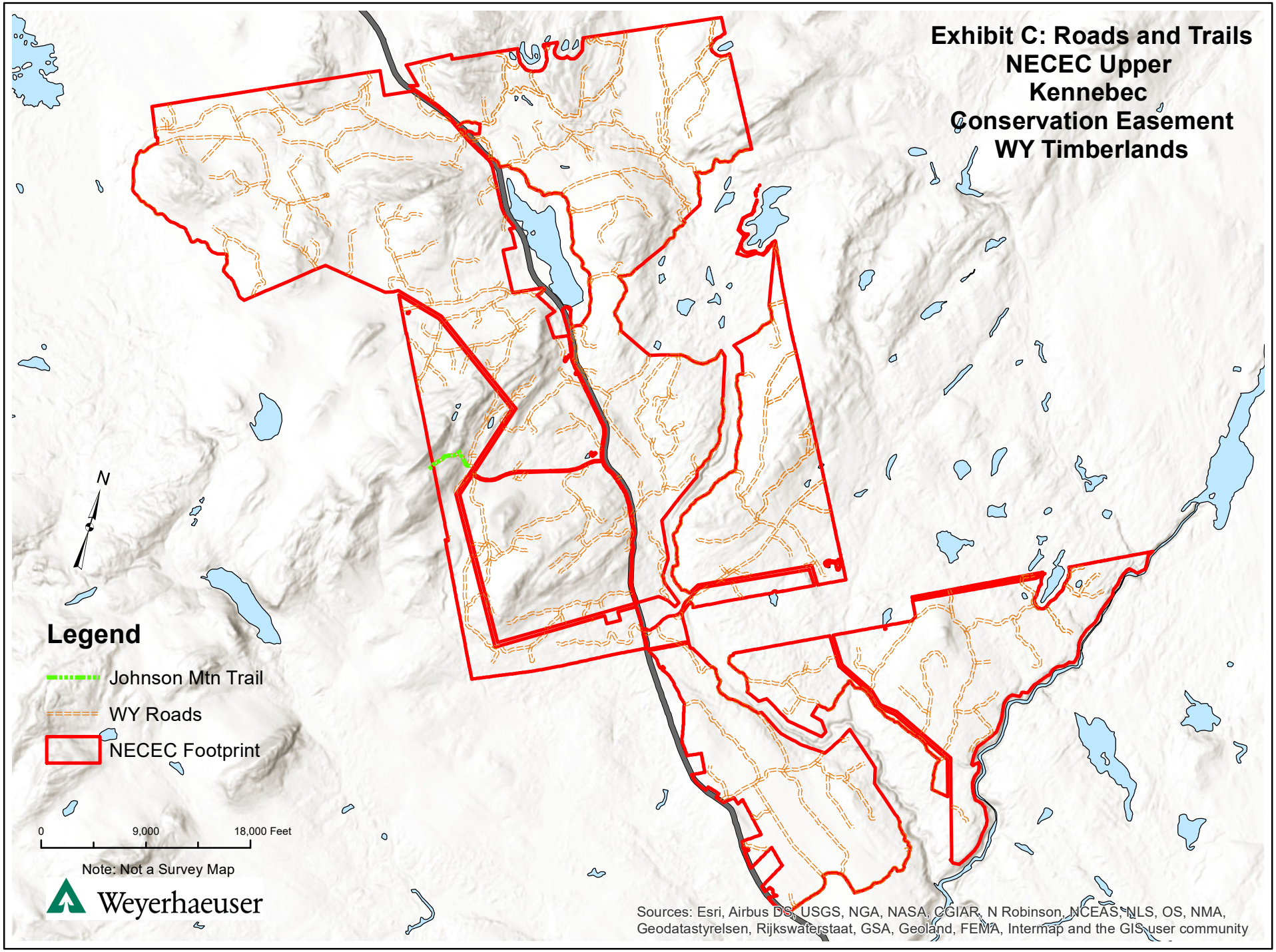
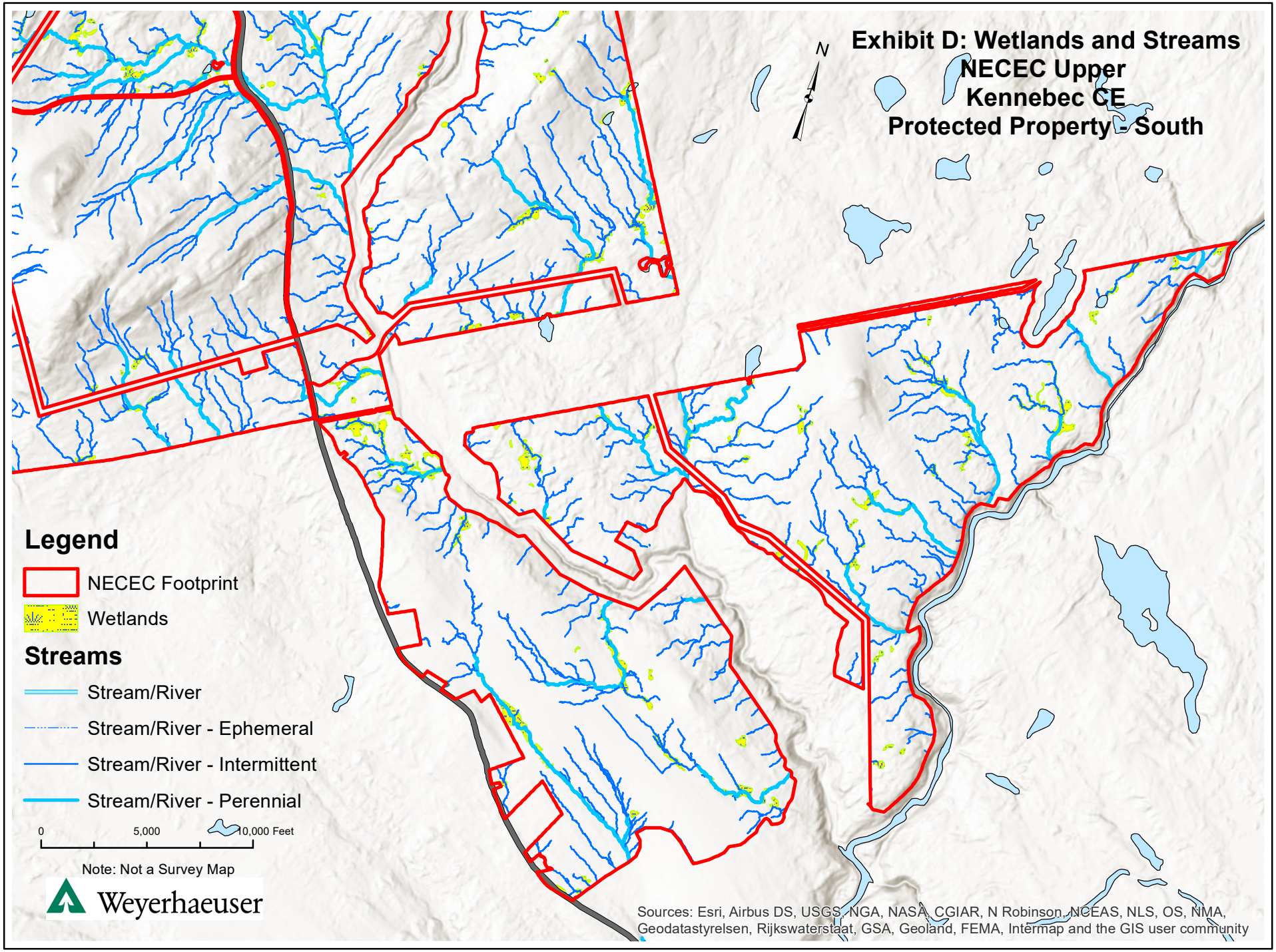

Exhibit C: Roads and Trails
NECEC Upper Kennebec Conservation Easement
WY Timberlands
N
Legend
Johnson Mtn Trail
WY Roads
NECEC Footprint
0
9,000
18,000 Feet
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Exhibit D

Map of Wetlands and Streams


Exhibit D: Wetlands and Streams
NECEC Upper
Kennebec CE
Protected Property - South
N
Legend
NECEC Footprint
Wetlands
Streams
Stream/River
Stream/River - Ephemeral
Stream/River - Intermittent
Stream/River - Perennial
0
5,000
10,000 Feet
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

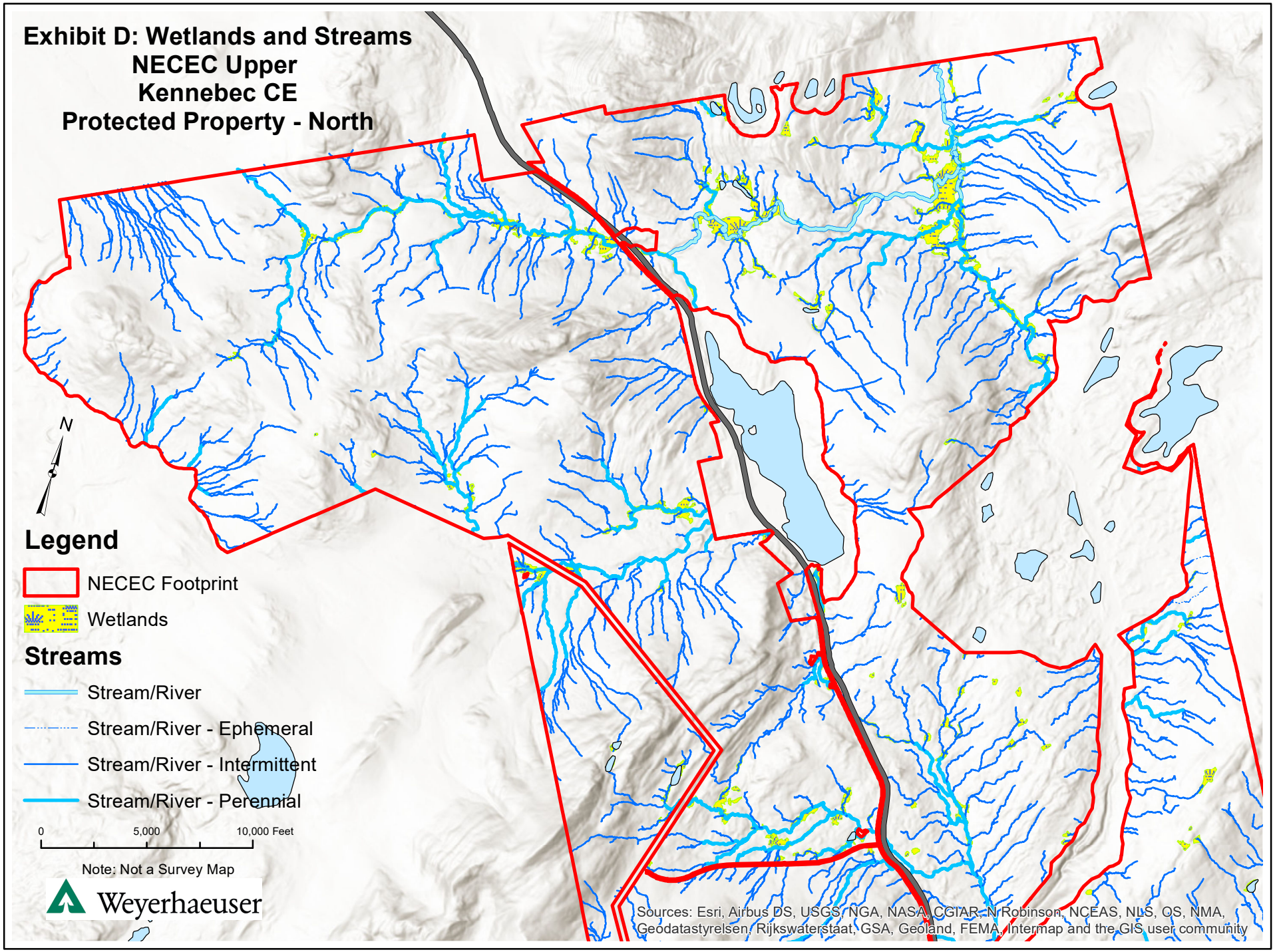
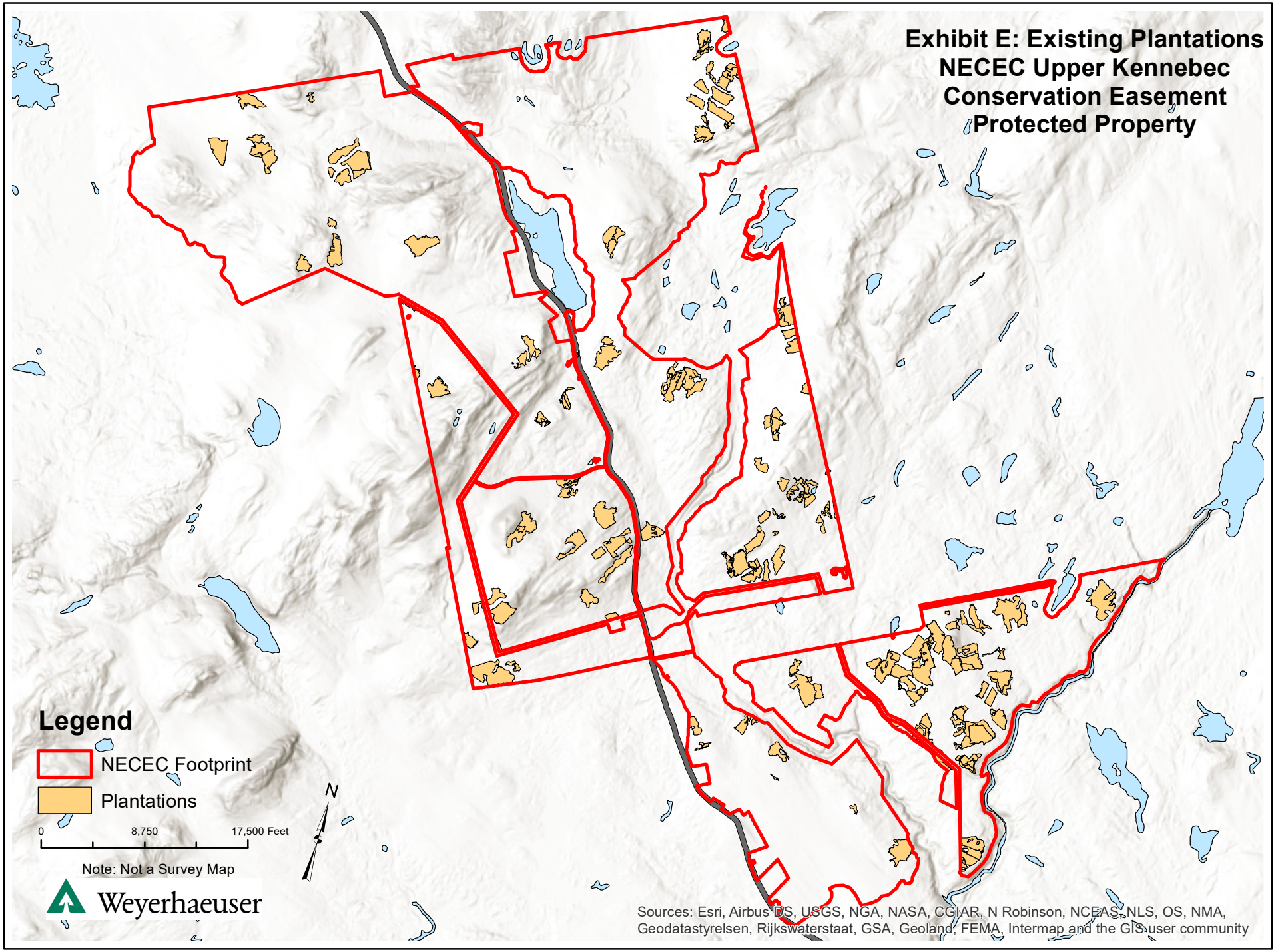

Exhibit D: Wetlands and Streams
NECEC Upper
Kennebec CE
Protected Property - North
N
Legend
NECEC Footprint
Wetlands
Streams
Stream/River
Stream/River - Ephemeral
Stream/River - Intermittent
Stream/River - Perennial
0
5,000
10,000 Feet
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Exhibit E

Existing Plantations located on the Protected Property


Exhibit E: Existing Plantations
NECEC Upper Kennebec
Conservation Easement
Protected Property
Legend
NECEC Footprint
Plantations
0
8,750
17,500 Feet
N
Note: Not a Survey Map
Weyerhaeuser
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Appendix B: Definitions

Baseline Documentation Report: The present condition of the Protected Property, including its conservation values, natural features and attributes, existing development, structures, buildings, and improvements, and existing uses of and activities on the Protected Property.

Conservation Plan: the Plan required by the Permit Orders that has a primary goal of compensation for the fragmenting effect on habitat of the NECEC, and the related edge effect, by promoting habitat connectivity and conservation of mature forest areas within the Protected Property.

Confirmed and Potential Endangered, Threatened and Special Concern Species: Species that are listed as Endangered, Threatened or are of Special Concern, each as defined below, that the MDIFW or MNAP have identified as either being present or have a strong potential of being present. In Maine, definitions and classifications for species of conservation concern are outlined by the Maine Department of Inland Fisheries and Wildlife (MDIFW).

1. Endangered Species - these are species in danger of extinction throughout all or a significant portion of their range within Maine. They receive the highest level of legal protection under the Maine Endangered Species Act (MESA).

2. Threatened Species - These are species likely to become endangered in the foreseeable future throughout all or a significant portion of their range in Maine. They also receive legal protection under MESA.

3. Species of Special Concern - This category includes species that do not currently meet the criteria for endangered or threatened status, but are considered, particularly vulnerable, at risk of becoming endangered, threatened, or extirpated (locally extinct), facing threats such as restricted distribution, low or declining numbers, or specialized habitat needs. These species are not legally protected under MESA but are monitored closely. Some are further designated as Special Concern – RARE, which may make them eligible for regulatory review, though they still lack the full legal protections of endangered or threatened species.

Exemplary Natural Communities: Communities defined by the Maine Natural Areas Program (MNAP) as "Any occurrence of a natural community type that is rare statewide (i.e., ranked S1, S2, or S3), or an exemplary occurrence of a more common community type (ranked S4 or S5)."

Forest Management Activities: Management of the forestland resources on the Protected Property, including, without limitation, the planting, growing, cultivation, stocking, and cutting of trees and other forest products; timber cruising; resource evaluation; herbicide, pesticide, and fertilizer application; timber stand improvement; pruning, mechanical and conventional timber harvesting and other forest harvesting; forest products transportation; natural and artificial

regeneration of Forest Stands; and other substantially similar and associated activities; and the construction, creation, use, and maintenance of woods roads, land management roads, skid trails, and haul roads, turnouts, timber landings, and crossing of flowing waters for such purposes; and any other forest management use or activity allowed by then-current law, rule, or regulation. Forest Management Activities also include management of the forest for wildlife habitat, outdoor recreation, scientific study, educational activities, and efforts to prevent, respond to, mitigate the effects of wildfires, invasive species, and potential or incurred tree damage by disease and insects.

Forest Stand: A contiguous group of trees sufficiently uniform in age class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

Mature Forest Habitat: A Forest stand consisting of a mix of native species with a minimum basal area of 80 square feet per acre of live trees at least 4.5 inches in diameter at breast height, including a minimum basal area of 60 square feet per acre of live trees at least 50 feet tall, accompanied by the presence of representative levels of well-distributed standing dead and downed trees as described and defined in the Conservation Easement in Section III and Section VII.A.6.

Normal High-Water Line: That line, which is apparent from visible markings, changes in the character of soils due to prolonged action of water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial habitat. In the case of riparian wetlands that are immediately adjacent to streams and other water bodies, the normal high-water line is the upland edge of the wetland, not the edge of the open water within the stream corridor as described and defined in the Conservation Easement Definitions in Section III.

Perennial Streams: Those streams identified in the Baseline Documentation Report as having flowing water year-round except during extreme droughts, which are subject to Perennial Stream Buffers.

Perennial Stream Buffers: The No-Harvest Buffers and the Mature Forest Buffers on Perennial Streams (see details in Section VII.A.6 in the Conservation Easement).

Permit Orders: The May 11, 2020, Maine Department of Environmental Protection Findings of Fact and Order for the New England Clean Energy Connect project, as affirmed and modified by the July 21, 2022, Maine Board of Environmental Protection Findings of Fact and Order.

Productive Forest: Forest Stands that are currently capable of growing Mature Forest. Habitat Sites incapable of supporting 50-foot-tall trees and 60 square feet basal area per acre based upon site index are not considered productive forest.

Protected Property: Approximately 50,060 acres in the vicinity of Segment 1 subject to the Upper Kennebec Conservation Easement, which is located in Bradstreet Township, Johnson Mountain Township, Parlin Pond Township and West Forks Plantation as further identified in the Baseline Documentation Report.

Rare Plant Populations: Native Vascular plant species whose populations are highly vulnerable to loss within the state. These populations are defined and tracked by the Maine Natural Areas Program (MNAP).

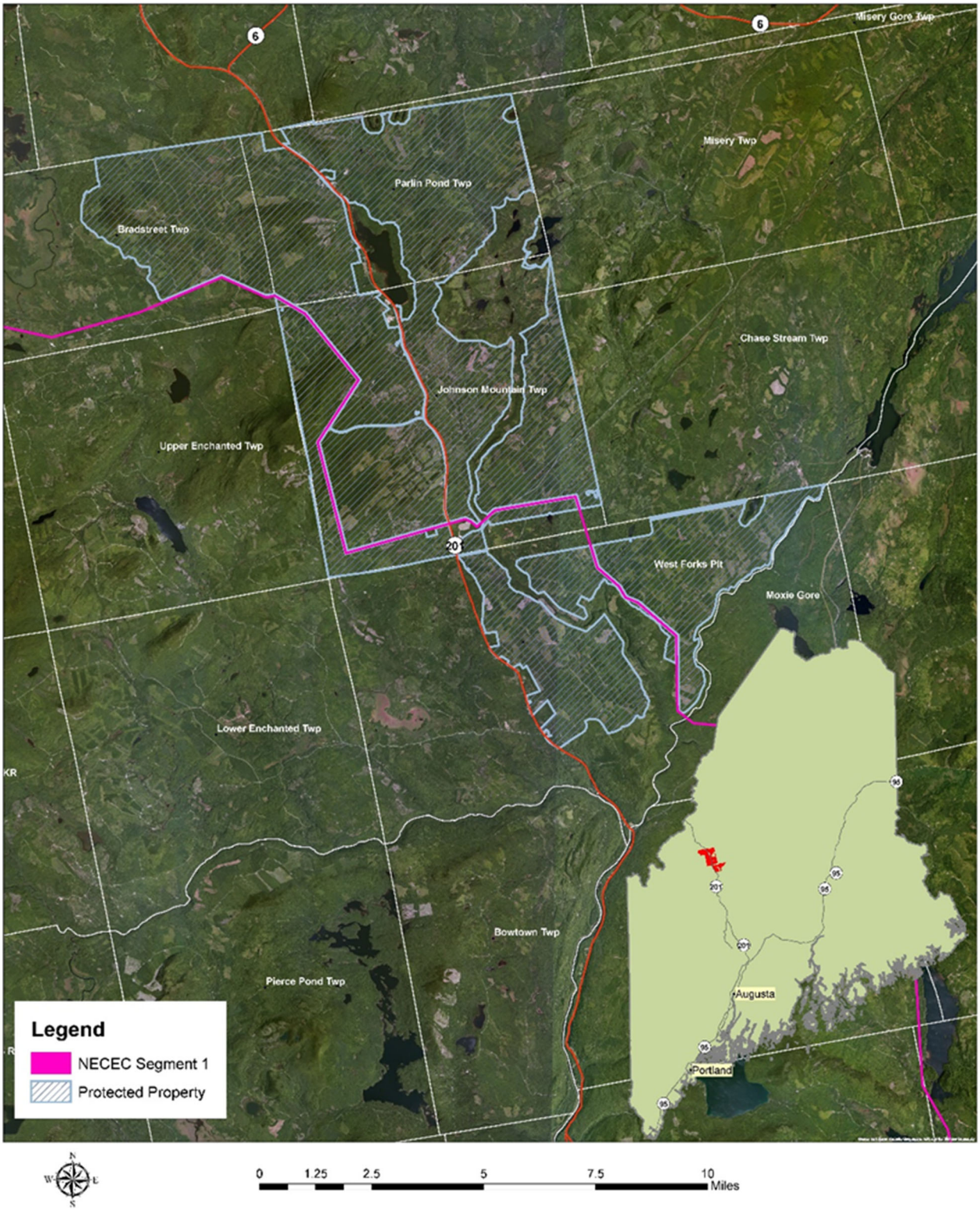
Riparian Wetlands: Wetlands located immediately adjacent to the banks of Perennial Streams.

Shifting Mosaic Forest Management: Over a larger landscape, harvesting that allows the types, sizes and age classes of tree species to constantly change over time and space. Shifting mosaic forest management principles include maintaining a variety of forest conditions and habitats, and considering how active management affects the landscape.

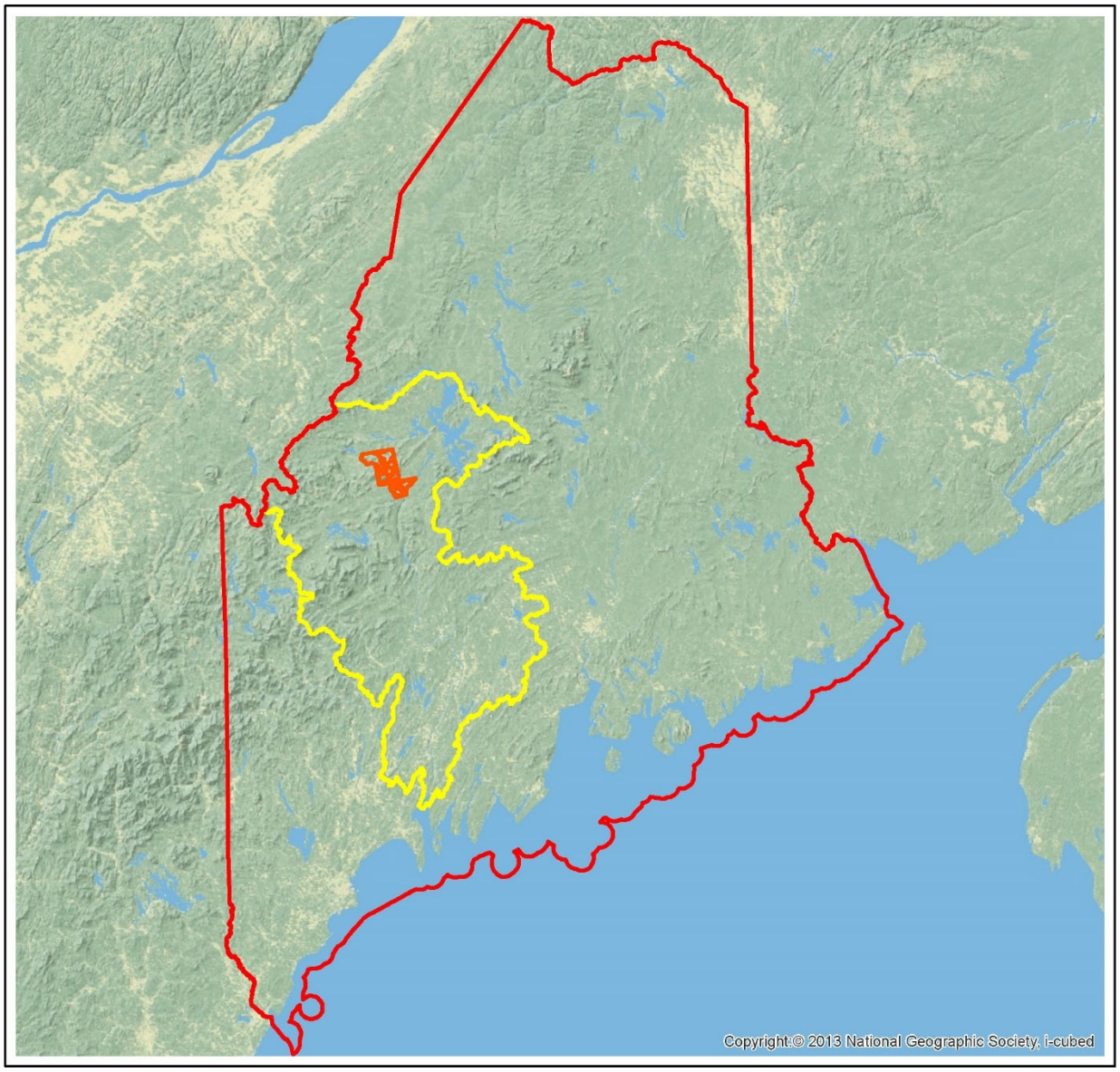
Timber harvesting: The cutting or removing of timber for the primary purpose of selling or processing forest products.

Well Distributed Coarse Woody Debris: Coarse Woody Debris refers to fallen dead trees, large branches, and logs that are left on the forest floor. These materials are considered "well distributed" when they are evenly spread across a forested area, rather than concentrated in piles or limited to certain zones.

Appendix C: Protected Property Map



Appendix D: Kennebec River Watershed Map



Legend

- State of Maine
- Kennebec River Watershed
- NECEC UKCE Footprint

N

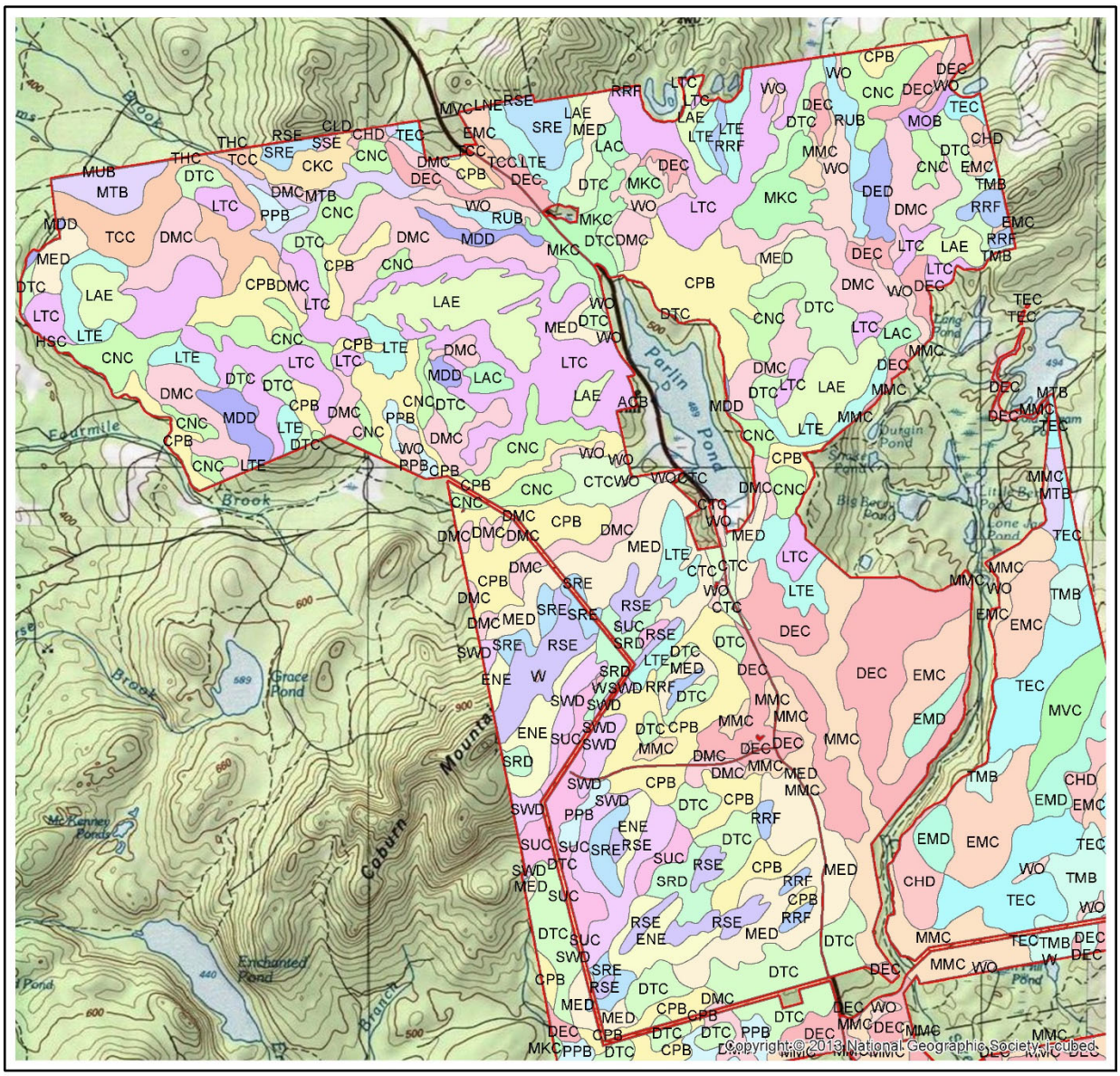
0 210,000 420,000 Feet

Note: Not a Survey Map

Weyerhaeuser

Appendix E: Soils Maps and Map Unit Details

NRCS Soils Map - North Half
NECEC Upper Kennebec CE - Protected Property



Legend

NECEC UKCE Footprint

USA Topo Maps

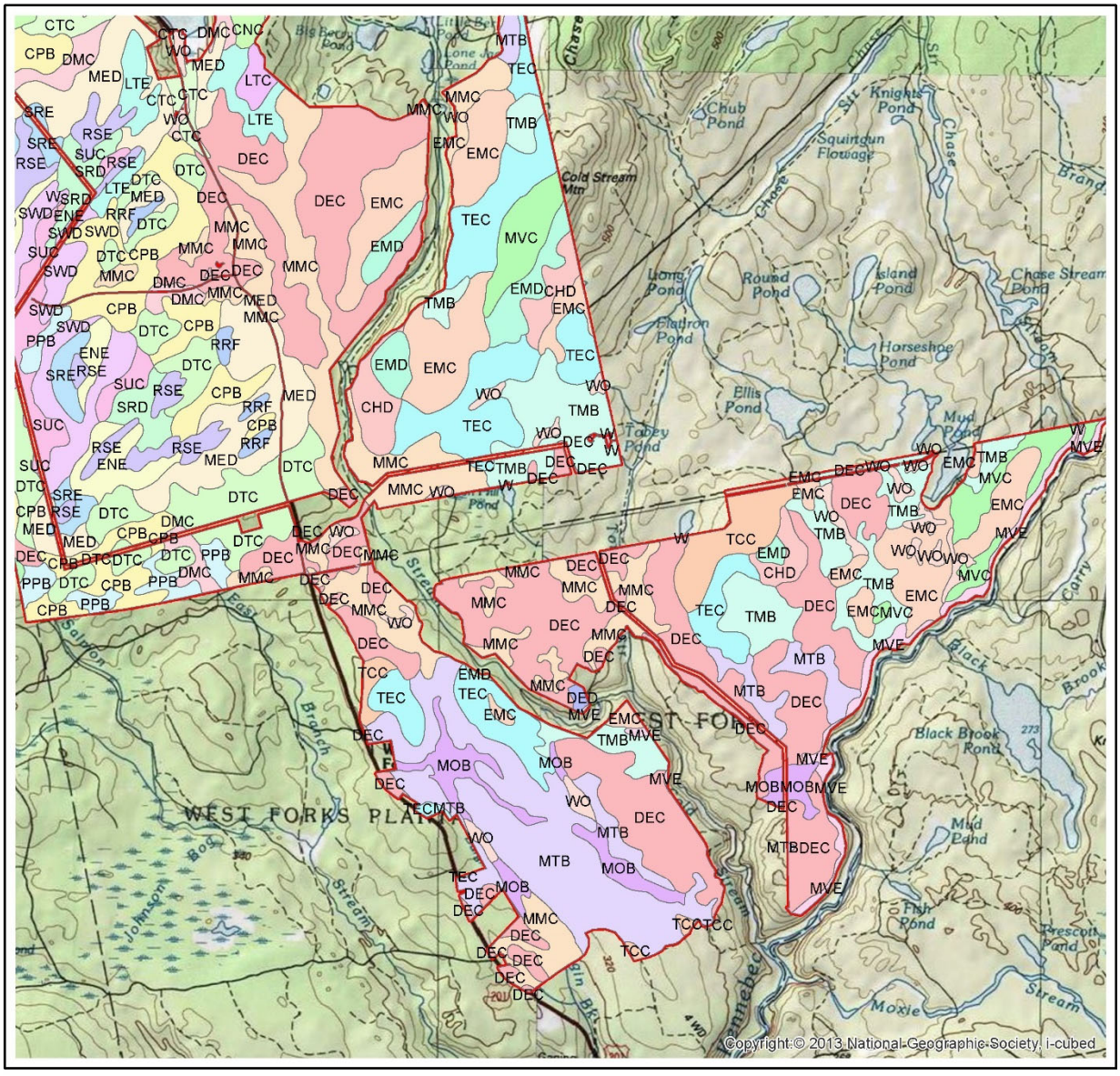
N

0 7,000 14,000 Feet

Note: Not a Survey Map

Weyerhaeuser

NRCS Soils Map - South Half
NECEC Upper Kennebec CE - Protected Property



Legend

NECEC UKCE Footprint

USA Topo Maps

N

0 7,000 14,000 Feet

Note: Not a Survey Map

Weyerhaeuser

Map Unit Legend

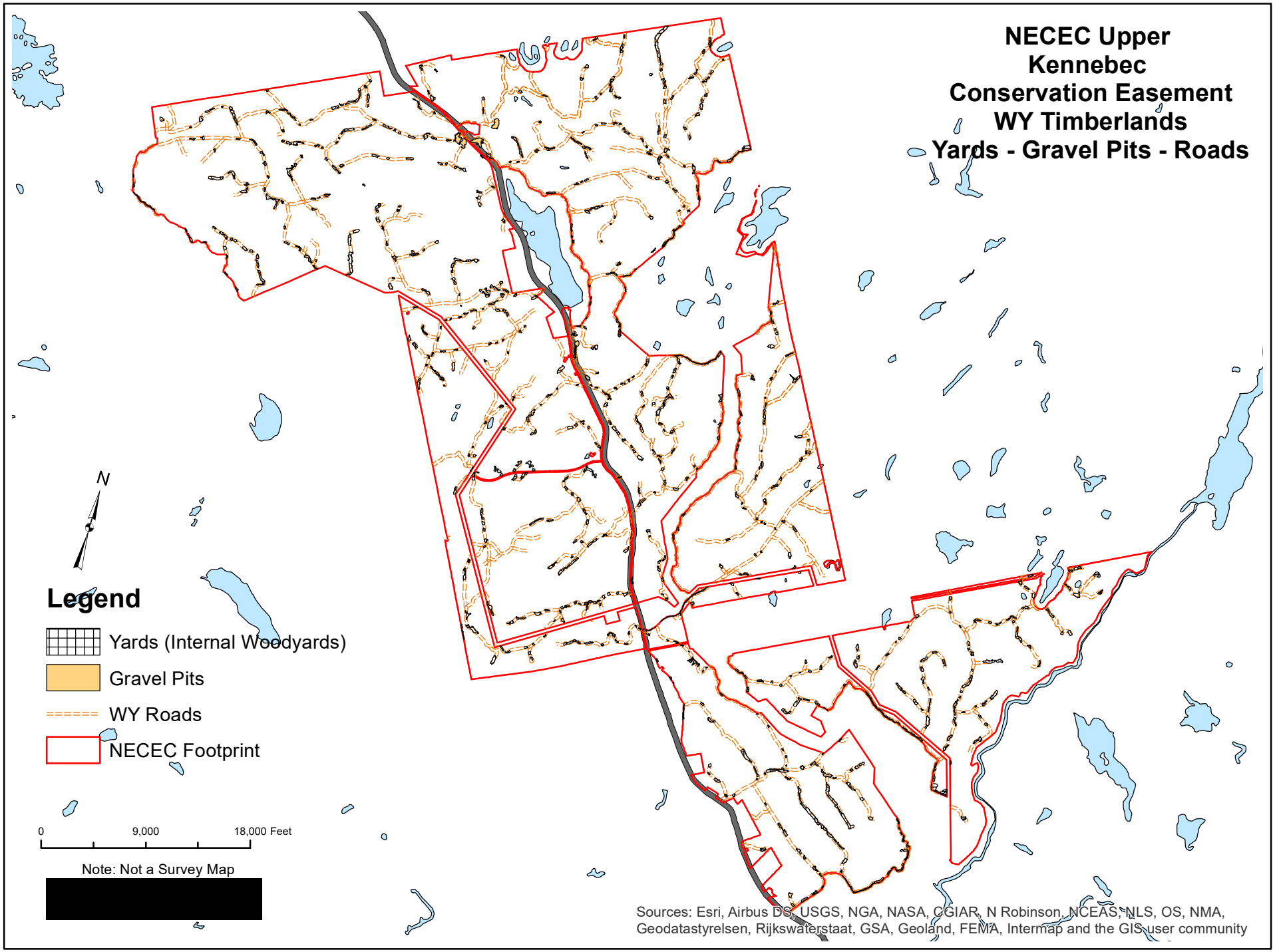
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CLD	Chesuncook-Telos association, 15 to 35 percent slopes, very stony	0.3	0.0%
ECC	Chesuncook-Elliottsville-Telos association, 3 to 15 percent slopes, very stony	0.1	0.0%
LNE	Lyman-Tunbridge-Abram complex, 15 to 35 percent slopes, rocky	1.1	0.0%
MUB	Monarda-Telos complex, 0 to 8 percent slopes, very stony	3.1	0.0%
MVC	Monson-Elliottsville-Telos complex, 3 to 15 percent slopes, very stony	1.0	0.0%
RSE	Ricker-Saddleback association, very steep	6.0	0.0%
SAE	Saddleback-Mahoosuc-Sisk association, very steep, very stony	0.1	0.0%
THC	Telos-Chesuncook association, 3 to 15 percent slopes, very stony	1.4	0.0%
Subtotals for Soil Survey Area		**12.9**	**0.0%**
Totals for Area of Interest		**50,062.3**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ACB	Adams-Croghan association, 0 to 8 percent slopes	2.0	0.0%
CHD	Chesuncook-Elliottsville-Telos association, 15 to 35 percent slopes, very stony	541.3	1.1%
CKC	Chesuncook-Telos association, 15 to 35 percent slopes, very stony	197.9	0.4%
CNC	Colonel-Peru-Pillsbury association, 3 to 15 percent slopes, very stony	1,935.4	3.9%
CPB	Colonel-Pillsbury-Peru association, 0 to 8 percent slopes, very stony	3,799.2	7.6%
CTC	Colton-Adams complex, 3 to 15 percent slopes	318.0	0.6%
CVC	Colton-Hermon association, 5 to 15 percent slopes	0.9	0.0%

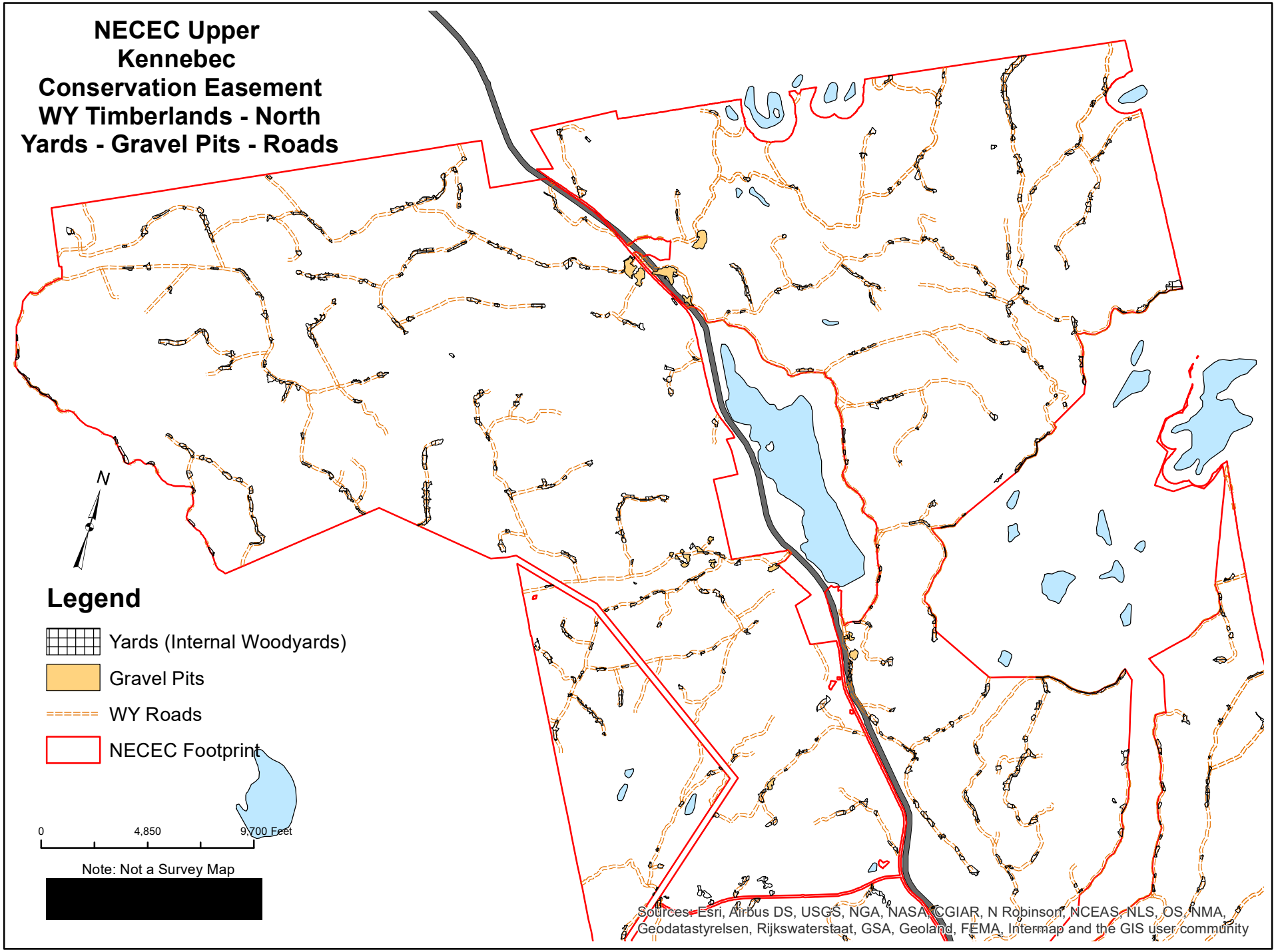
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DEC	Danforth-Elliottsville association, 3 to 15 percent slopes, extremely stony	6,533.0	13.0%
DED	Danforth-Elliottsville association, 15 to 30 percent slopes, extremely stony	176.2	0.4%
DMC	Peru-Colonel-Marlow association, 3 to 15 percent slopes, very stony	3,140.6	6.3%
DTC	Peru-Colonel-Rawsonville association, 3 to 15 percent slopes	3,057.1	6.1%
EMC	Elliottsville-Monson complex, 3 to 15 percent slopes, very stony	2,260.3	4.5%
EMD	Elliottsville-Monson complex, 15 to 30 percent slopes, very stony	514.5	1.0%
ENE	Enchanted-Mahoosuc association, 30 to 80 percent slopes	627.0	1.3%
HSC	Hermon-Skerry association, 0 to 15 percent slopes, extremely stony	0.0	0.0%
LAC	Hogback-Abram complex, 4 to 25 percent slopes	207.3	0.4%
LAE	Hogback-Abram complex, 15 to 60 percent slopes	1,480.5	3.0%
LTC	Hogback-Rawsonville complex, 4 to 25 percent slopes	3,294.3	6.6%
LTE	Hogback-Rawsonville complex, 20 to 60 percent slopes	1,379.5	2.8%
MDD	Marlow-Peru association, 15 to 35 percent slopes, very stony	319.1	0.6%
MED	Marlow-Peru-Rawsonville association, 12 to 30 percent slopes	2,180.2	4.4%
MKC	Masardis-Adams complex, 3 to 15 percent slopes	631.1	1.3%
MMC	Masardis-Danforth-Peacham association, 0 to 15 percent slopes, extremely stony	2,657.7	5.3%
MOB	Monarda-Burnham complex, 0 to 3 percent slopes, very stony	622.3	1.2%
MTB	Monarda-Telos complex, 0 to 8 percent slopes, very stony	2,794.9	5.6%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MVC	Monson-Elliottsville-Knob Lock complex, 8 to 30 percent slopes, very rocky	674.6	1.3%
MVE	Monson-Elliottsville-Knob Lock complex, 30 to 60 percent slopes, very rocky	271.3	0.5%
PPB	Pillsbury-Peacham association, 0 to 8 percent slopes, very stony	477.4	1.0%
RRF	Ricker-Rock outcrop complex, 3 to 80 percent slopes	272.0	0.5%
RSE	Ricker-Saddleback-Rock outcrop complex, 20 to 60 percent slopes	792.3	1.6%
RUB	Roundabout-Croghan association, 0 to 8 percent slopes	232.0	0.5%
SRD	Saddleback-Ricker complex, 10 to 50 percent slopes	396.3	0.8%
SRE	Saddleback-Ricker complex, 25 to 60 percent slopes	632.6	1.3%
SSE	Saddleback-Sisk-Rock outcrop association, 20 to 45 percent slopes	11.4	0.0%
SUC	Surplus-Bemis association, 5 to 15 percent slopes	524.4	1.0%
SWD	Surplus-Sisk association, 12 to 30 percent slopes	734.6	1.5%
TCC	Telos-Chesuncook association, 3 to 15 percent slopes, very stony	1,237.1	2.5%
TEC	Telos-Chesuncook-Elliottsville association, 3 to 15 percent slopes, very stony	2,087.2	4.2%
TMB	Telos-Monarda-Monson association, 0 to 8 percent slopes, rocky	1,867.1	3.7%
W	Water bodies	16.3	0.0%
WO	Bucksport and Wonsqueak mucks, 0 to 2 percent slopes	1,152.1	2.3%
Subtotals for Soil Survey Area		**50,048.7**	**100.0%**
Totals for Area of Interest		**50,062.3**	**100.0%**

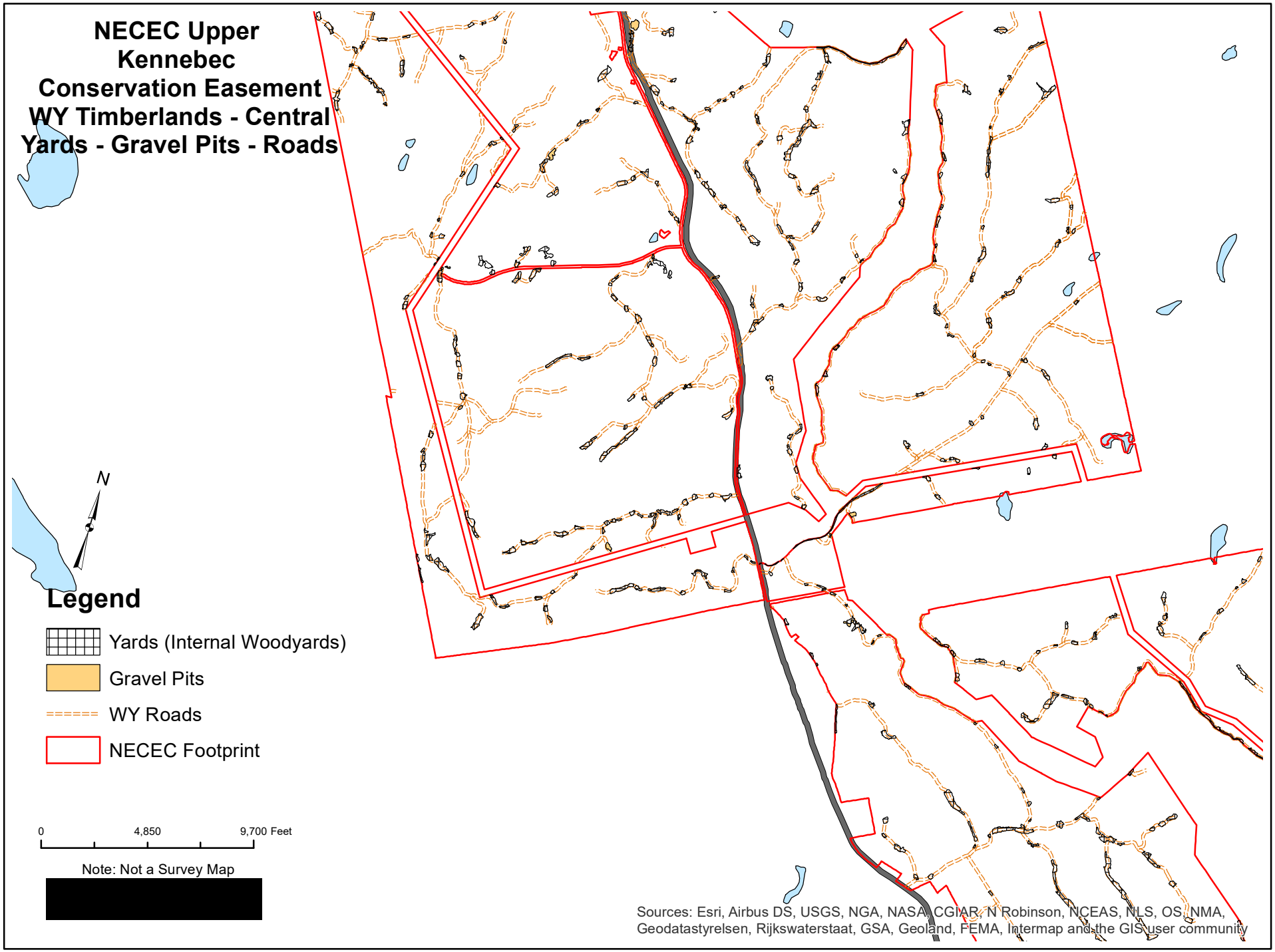
Appendix F: Forest Management Roads & Landings on Protected Property

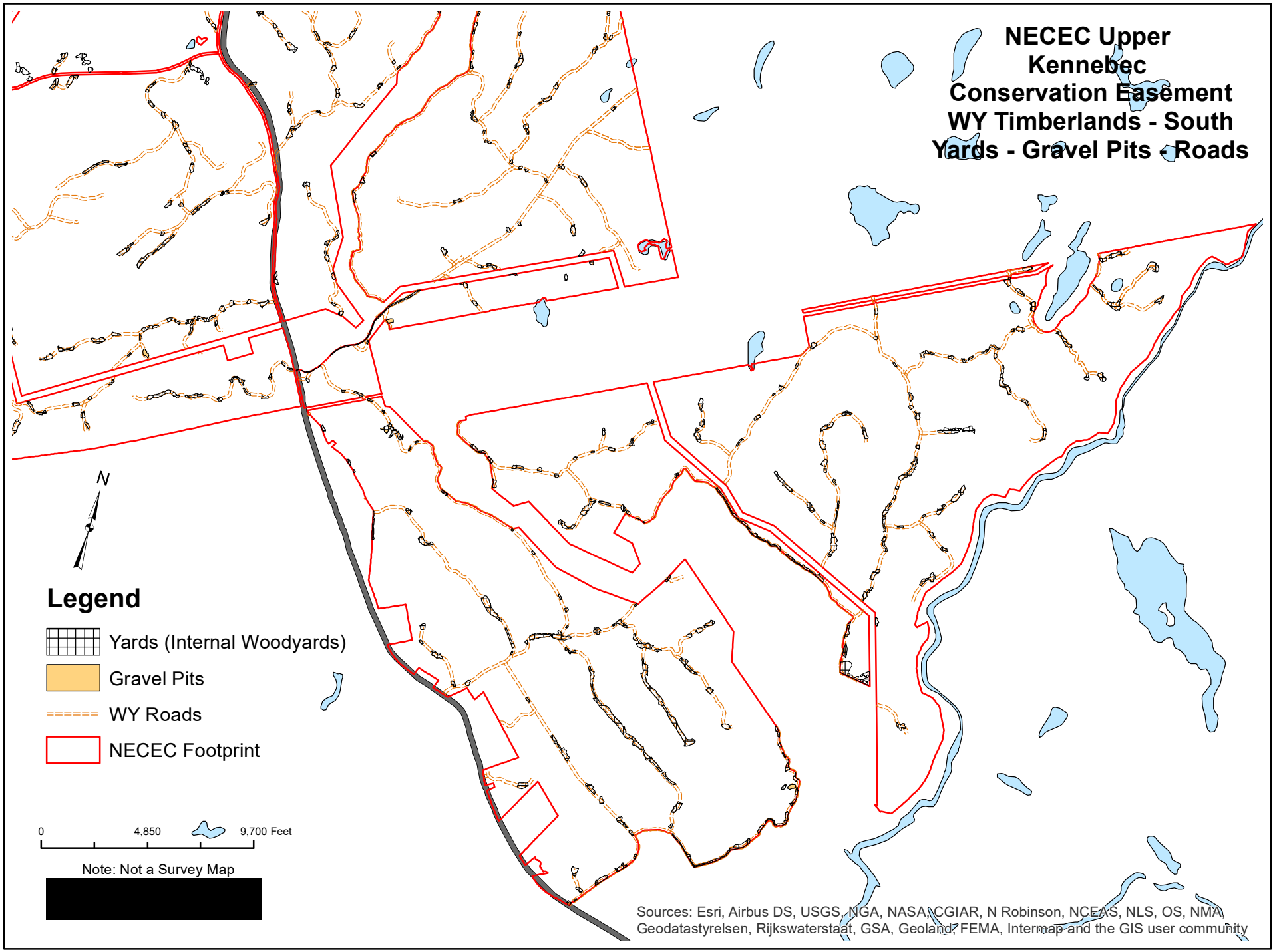

NECEC Upper
Kennebec
Conservation Easement
WY Timberlands
Yards - Gravel Pits - Roads
N
Legend
Yards (Internal Woodyards)
Gravel Pits
WY Roads
NECEC Footprint
0
9,000
18,000 Feet
Note: Not a Survey Map
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

NECEC Upper Kennebec Conservation Easement WY Timberlands - North Yards - Gravel Pits - Roads

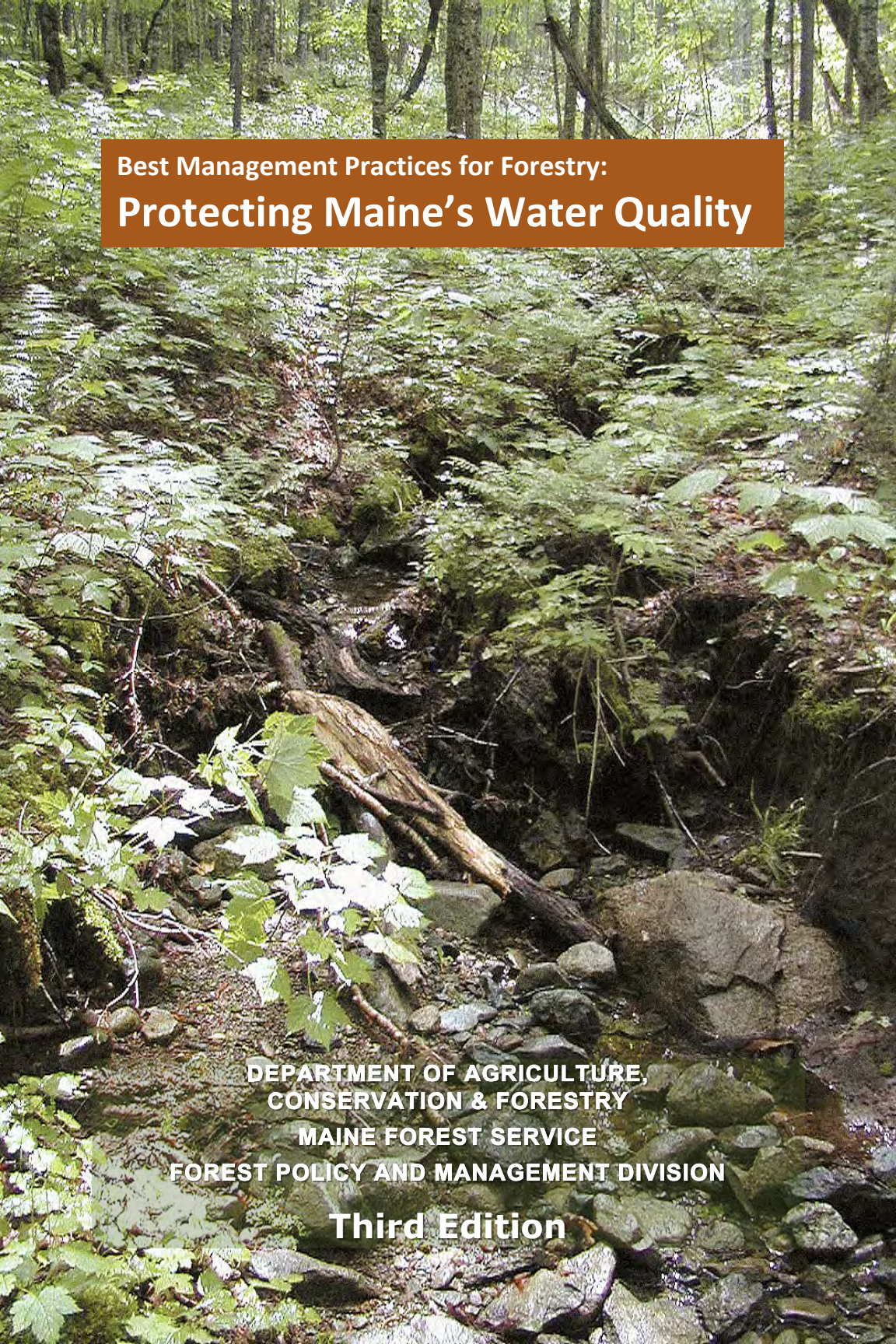


NECEC Upper Kennebec Conservation Easement WY Timberlands - Central Yards - Gravel Pits - Roads




NECEC Upper Kennebec Conservation Easement WY Timberlands - South Yards - Gravel Pits - Roads
N
Legend
Yards (Internal Woodyards)
Gravel Pits
WY Roads
NECEC Footprint
0
4,850
9,700 Feet
Note: Not a Survey Map
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Appendix G: Best Management Practices (BMP) Standards



Best Management Practices for Forestry:
Protecting Maine's Water Quality

DEPARTMENT OF AGRICULTURE,
CONSERVATION & FORESTRY

MAINE FOREST SERVICE

FOREST POLICY AND MANAGEMENT DIVISION

Third Edition

The Maine Forest Service

The Maine Forest Service was established in 1891 to ensure Maine's citizens the greatest economic and social benefits from the trees and forestlands of the state.

The primary responsibilities of the Maine Forest Service include:

To develop through information, education and formal publications a greater public awareness and appreciation of forests as Maine's basic economy and renewable resource;

To provide advice and assistance in forest management to woodland owners;

To maintain and improve the scenic beauty, wildlife habitat and recreational values of Maine;

To encourage and promote appropriate forestland management practices;

To protect Maine's forests from fire, insects, diseases, and other natural enemies; and

To enforce Maine's forestry laws and rules by preventing violations, intervening with potential problems and, as a last resort, take enforcement action.





3rd Edition
January 2017

Printed in Maine on certified paper under Appropriation 014 01A 2662 12

ACKNOWLEDGEMENTS FOR THE FIRST EDITION

This document is a publication of the Maine Department of Agriculture, Conservation and Forestry's Maine Forest Service. It fulfills a portion of the state's commitment under its Nonpoint Source Pollution Program (38 M.R.S. §410), and replaces the MFS publication "Best Management Practices Field Handbook" published in 2010.

This document was developed by the Maine Forest Service's Forest Policy and Management Division, with the assistance of FORAT (Forestry Advisory Team), an advisory group with broad representation from Maine's forestry community.

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Partial funding for this project was provided by a Maine Outdoor Heritage Fund grant and funds from Maine's Coastal Zone Program. The manual was developed and printed under appropriation #014.04A.0240.552.

The Maine Forest Service would like to thank the hundreds of loggers, foresters, and landowners whose work in forest management and harvesting helped shape this manual. They demonstrate their professionalism every day.

3RD EDITION EDITS: Rondi Doiron, Greg Miller, Dan Jacobs, Don Mansius and Tom Gilbert.

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SECTION 1 INTRODUCTION



INTRODUCTION

WHAT THIS HANDBOOK IS

This handbook describes Best Management Practices, or BMPs, for protecting water quality during forest harvests. The BMPs include a wide range of recommended techniques that can be used before, during, and after logging operations. Loggers, foresters, and scientists from Maine and other states have developed these techniques from their own practical experience and research.

This handbook is for woodlot owners, loggers, foresters, and others involved in harvest operations. The handbook will help you understand, identify, design, and implement water quality protection measures while meeting other harvest objectives.

This book will help you to:

- Understand how BMPs work. It is more effective, cheaper, and easier to prevent pollution than to fix problems after they occur. When you understand the principles behind BMP techniques, you will be able to anticipate and prevent problems before they end up costing you time and money.

- Decide which BMPs to use. Harvest sites can vary significantly, and different techniques are appropriate to different sites. By applying BMP principles, you will be able to use your own judgment and this handbook to select the most appropriate and effective BMPs for a particular site.

WHAT THIS HANDBOOK IS NOT

BMPs are not the same as regulations. Best Management Practices are recommended procedures that, when used appropriately, will result in the greatest protection of the environment over the course of the operation. Regulations prescribe required, minimally acceptable practices. Some BMPs may be mandatory in some situations; others may be voluntary, depending on the site and local and state laws.

This handbook is not a complete how-to manual for installing BMPs. Please see “Section 4: For More Information” for titles of other documents that provide technical details on BMP installation.

This handbook focuses on water quality BMPs. There are BMPs that protect wildlife habitat, soil integrity and productivity, aesthetics, and other aspects of the forests. Although these values are important, they are not the focus of this manual.

HOW TO USE THIS MANUAL

In order to decide how and when to use BMPs, it's important to understand how they work to protect water quality. "Section 1: What is Water Quality?" explains different characteristics of water quality, how harvesting practices can affect them, and where it is most critical to use BMPs.

"Section 2: Fundamental BMPs" discusses fundamental BMP principles and key steps toward the overall goal of protecting water quality. These principles give you an overview of the most important things to keep in mind before, during, and after a harvest.

"Section 3: BMPs for Every Stage" lists specific BMPs for stream crossings, truck roads, log landings, skid trails, and harvesting areas. Under each of these headings is a discussion of the planning, construction, maintenance, and closeout BMPs applicable to that topic.

Throughout the manual, you will also find STOP signs that will alert you to potential legal requirements. ⚠ signs will point out important topics that shouldn't be overlooked. Each section is color-coded on the edge of the page to make it easier for you to find information about a specific topic.


SECTION 3 BMPs FOR EVERY STAGE

BUILD IT RIGHT

PERMANENT CROSSINGS

BMPs

1 If possible, build crossings when streams are dry or at low water. If considerable excavation is necessary during periods of regular or high flow, temporarily divert the water while installing the crossings.

STOP Permanent crossings may require permits, especially if water must be diverted during installation.

2 Install crossings and approaches using a "no-grub zone" at least the width of the filter area, wherever possible.

- Minimize excavation on stream banks and approaches.
- Construct road approaches using fill (instead of grubbing), leaving the forest floor undisturbed, especially outside the road prefile. Consider surfacing with clean gravel or stone. This will stabilize the road surface, prevent it from eroding directly into the stream, and keep mud from being tracked onto the crossing structure.
- Use geotextile and fill on unstable soils or during wet weather.
- Set abutments back from the stream's edge.

3 Design bridges using solid decking or other features to minimize the amount of material that falls through the deck and into the stream.

Two types of permanent crossings.

45

HOW BMPs PROTECT WATER QUALITY

WHAT IS WATER QUALITY?

Forest areas in and around waterbodies are complex systems and provide habitat for a wide range of plants and animals. These forest areas, and the waterbodies in them, are the setting for different processes that provide food, water, shelter, breeding space, and other needs. For our purposes, "water quality" refers to the characteristics of water in nature that support life. These include the natural chemical, physical, and biological aspects of streams, rivers, ponds, lakes, and non-forested wetlands. The chemical properties of water include pH, dissolved oxygen, nutrients, and the presence of chemical pollutants. The physical properties of water include such things as turbidity (how clear or cloudy the water is) and temperature. In addition, the physical characteristics and natural processes of waterbodies are important aspects of water quality. Examples include stable channels, the transport of nutrients, the volume and speed of the water, the streambed material, and sticks and logs that have fallen into streams naturally.

Forest streams, lakes, and wetlands typically have excellent water quality. Forestry operations that use best management practices can protect these waterbodies' natural ability to support life. By preventing stream sedimentation, such operations can maintain streambed properties and the clean water that allows fish—and the aquatic insects they depend on—to feed and spawn. Leaving trees that shade and provide leaf litter to waterbodies limits changes in water temperature and chemical characteristics that could reduce the ability of some species to survive and reproduce. These are just the most commonly understood examples of how maintaining the properties of water in forests can protect aquatic habitats.

Although water quality is a complex subject, BMPs are intended as relatively simple, practical steps that protect water quality. Most BMPs in this manual address turbidity by keeping sediment out of streams. Several other BMPs preserve the physical integrity of waterbodies and their natural processes. If these issues are addressed, most other aspects of water quality will be protected, too.

KEY ISSUE

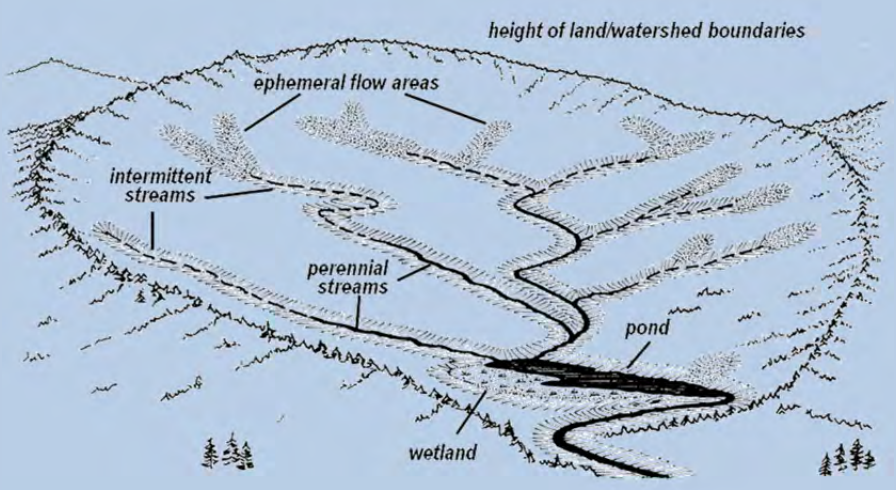
Water Movement

Maine has thousands of lakes and ponds, large areas of forested and non-forested wetland, and thousands of miles of streams and rivers. All these forest waterbodies, and the areas that drain to them, are connected by moving water. Most of the water in the forest comes from rain or snowmelt which is either absorbed into the soil, flows over the ground, or enters stream channels, flowing downhill.

WATERSHED

A **watershed** is all the land and waterbodies from which water drains to a given point. You can define a watershed for an entire lake, for a stream at a crossing site, or for a river where it reaches the ocean. Watersheds range in size from just a few acres (for a small stream), to thousands of acres (for a large river). All land is part of some watershed.

It is critical to understand where water is coming from and draining to in the watershed where logging is planned. The amount of cutting or road construction at higher elevations can affect the amount and timing of runoff at lower elevations within the same watershed. When you know where, when, and how much water flows in the harvest area, you will be able to determine the best locations for roads and trails, and what types of BMPs you will need to control water movement.



The watershed of a pond.

In this manual, “waterbodies” includes streams, rivers, lakes, ponds, and wetlands, as well as coastal areas. BMPs are recommended primarily for those areas where water is at or near the surface (streams, lakes, or wetlands), and where runoff can move directly into surface waterbodies. These waterbodies and related areas are defined and illustrated below.

EPHEMERAL FLOW AREAS

Ephemeral flow areas are small drainage areas that flow into streams, but have no defined, continuous channel. Examples are low-lying depressions, or swales with an intact forest floor. Soils in these areas may quickly become saturated during rainy periods, storms, or snowmelt. Surface water flows in these low areas over saturated soil without forming a channel. Water from ephemeral flow areas may carry sediment or other materials directly into streams. Ephemeral flow areas change in size in response to the soil and weather conditions, and are the proximate source of much of the water that enters small streams.



Ephemeral flow areas are small drainages, with no defined channel, where water flows into streams during wet periods.

STREAMS

Streams are natural water channels that:

- may flow year-round or only part of the year;
- have a defined channel and banks;
- are relatively continuous and connected with larger surface waters; and
- have a streambed where flowing water has exposed the mineral bottom of soil, sand, gravel, ledge, or rock.

Forest streams in Maine vary widely in how much water they carry, how steep they are, the shape of the streambed or channel, how much area they drain, and when they flow. **Perennial streams** flow year-round and range from small brooks to large rivers; **intermittent streams** flow only a few months of the year, and/or during wet seasons.



Streams can vary widely, but all have a defined, continuous channel, a streambed with exposed soil, and carry water at least part of the year.



The **normal high water mark** is the place on the stream bank where the highest water levels typically occur, often during spring runoff. You can identify it from features like undercutting of the bank; a change in the type of vegetation; exposed roots that do not penetrate beyond a certain level; root scars; and water stains on stems, roots, or other vegetation.



One indication of the normal high water mark is undercutting or scouring of the bank.

WETLANDS

Wetlands are areas where soils are saturated or flooded a significant part of the year, and where water-loving plants are often found. Wetland soils usually have developed special characteristics, and often have a significant amount of water moving below the surface.

Forested wetlands are dominated (or potentially dominated) by trees taller than 20 feet. Forested wetlands vary widely in their characteristics, often have relatively little water directly at the surface, and have indistinct borders. They may require considerable expertise to identify. Forested wetlands are often managed for timber, with roads and trails crossing them.

Non-forested or **open wetlands** are not dominated by trees, though they may have some scattered trees, mostly less than 20 feet tall. They have water at or near the surface at least part of the year, and may have a more or less distinct border defined by the surrounding forest. The high water and organic content of wetland soils make them considerably weaker than upland soils and difficult to work in. Non-forested wetlands are not managed for timber, and should be crossed only when they cannot be avoided.

Vernal pools are a type of wetland, typically forested, which provide specialized habitat and deserve special attention. Separate guidelines for protecting vernal pool habitat are available from the Maine Forest Service.



forested wetlands



non-forested wetlands



vernal pools

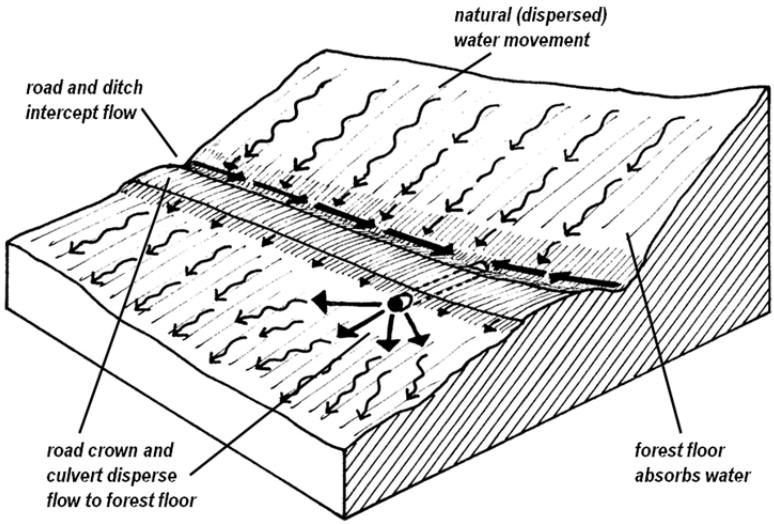
HOW HARVESTING AFFECTS WATER QUALITY

HOW HARVESTING CHANGES WATER FLOW

Forest harvests can directly impact water quality by affecting how water flows through an area. In particular, constructing roads, trails, landings, or drainage systems can:

- **Reduce the soil's absorbency.** This can occur any time the forest floor is disturbed, removed, compacted, or otherwise damaged.
- **Increase soil erosion.** The opportunity for soil to be carried away by runoff increases greatly when mineral soil is exposed or fill is used.
- **Divert water flows.** Roads and trails can block or intercept water moving over or through the soil. The more water that accumulates, the greater the chance that it will form a channel and start eroding soil. Sometimes harvesting can cause streams to erode a new channel by blocking the stream's flow with logs or debris.
- **Concentrate water flows.** Roads, trails, landings, and their associated drainage structures can collect and funnel runoff, creating rills or gullies. In these situations, water erodes and transports exposed soil in its path.
- **Diminish the benefits of vegetation next to waterbodies.** Harvesting may reduce shade on the water's surface, reduce the amount of natural woody debris, or eliminate leaf litter that is an important food source for aquatic life. In addition, timber harvests that remove a significant percentage of the trees in a watershed can increase the amount of water moving through the soil into streams, and in some instances, increase flooding.

Usually, it is impossible to avoid disturbing some soil or concentrating some flowing water during a harvest. The important point to remember is to avoid these disturbances as much as possible, and to use BMPs to prevent them from resulting in sedimentation or erosion.



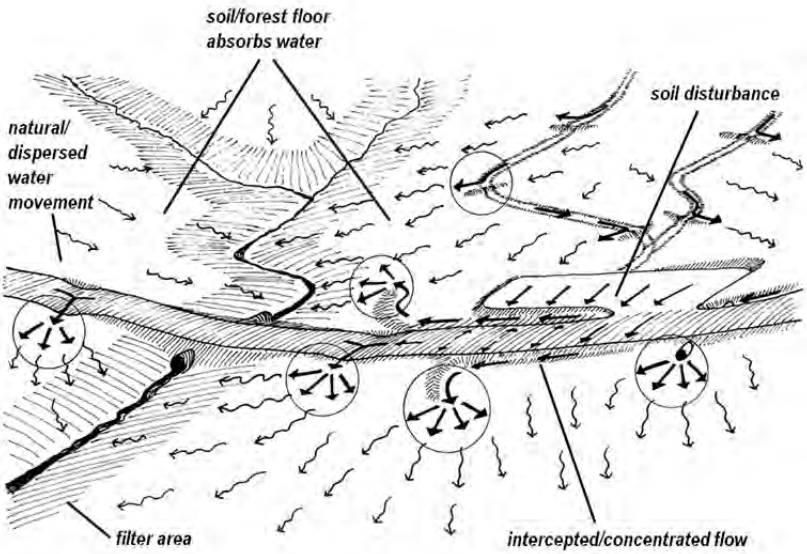
Harvesting operations intercept natural water movement and concentrate it in ditches or on the road/trail surface.

DRAINAGE SYSTEMS OR STRUCTURES are techniques used to get water off the road, trails, or landing. These can include the road crown, ditches, turnouts, cross-drainage culverts, water bars, etc.

WHAT DO BMPs DO?

BMPs are designed to mimic or protect the natural functions of forests. BMPs can absorb or disperse runoff, retain soil nutrients, filter sediment, prevent large changes in water temperature, and contribute organic material to surface waters.

- **BMPs minimize the risk of sediment and other pollutants getting into waterbodies.** Sediment—soil, dirt, silt, sand, mud—is the primary type of water pollution from forestry operations.
- **BMPs maintain the natural flow of water in streams and wetlands.** They avoid blockages, keep water flowing in its natural path, and prevent damage to the streambed and banks.
- **BMPs protect shoreland vegetation.** Some practices simply preserve enough of the forest so that it continues to function normally: shading the waterbody and stabilizing water temperatures, maintaining the soil's natural functions, and contributing organic matter that serves as habitat and a food source to aquatic plants and animals.



One way BMPs minimize impacts to water quality is by dispersing concentrated water flow. Circles indicate where BMPs disperse flow to the undisturbed forest floor.

CATERPILLAR

FUNDAMENTAL BMPs



Most BMP techniques are based on a few basic principles. This section provides an overview of these fundamental BMPs and how they protect water quality.

Understanding these principles will enable you to select or adapt the BMPs that are the most appropriate and effective. Think of these principles as goals. Any single practice or combination of practices that effectively achieves one or more of these key goals could be considered an appropriate BMP.

1. DEFINE OBJECTIVES AND RESPONSIBILITIES

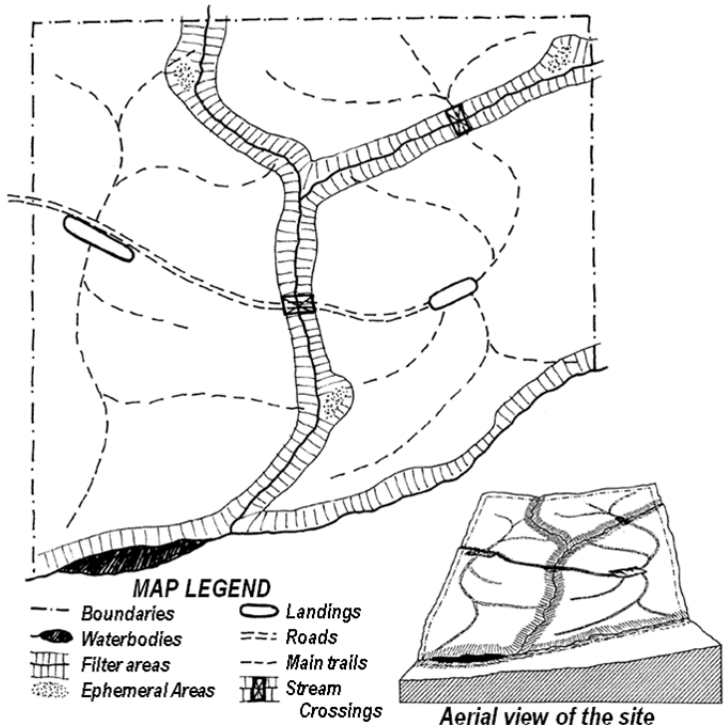
- **Determine the harvest objectives with the landowner, forester, and logger.** The first step in planning, prior to beginning work, is to communicate with everyone involved what the harvest objectives are. Discuss what's going to be cut, where, and the desired condition of the remaining forest.
- **Decide who is responsible for BMPs.** You will want to agree in advance (and in a written contract) who is responsible for implementing the BMPs, including deciding when to operate, locating streams, laying out the operation, and planning and maintaining the BMPs.
- **Find out what legal requirements apply to waterbodies in the harvest area.** The basic legal requirement in Maine is to keep pollution—including mud, silt, rock, soil, brush, or chemicals—out of the water. When working near waterbodies, find out what town, state, or federal standards apply, and if permits are needed.

STOP **Know the laws! Landowners, foresters, and loggers should determine what laws apply on a particular job. However, it is Maine landowners who are responsible *by state law* for preventing mud, sediment, and other pollutants from entering waterbodies. This manual does not replace legal standards, and reading it is not a substitute for**

2. PRE-HARVEST PLANNING

Pre-harvest planning is a good business practice and avoids many problems. Planning will help reduce costs, make the job more efficient, protect roads and trails that will stay in place after the job, leave the job looking better, *and* protect water quality.

- **Determine the harvest area limits and property boundaries on the ground. Know whose responsibility it is to identify the property boundaries correctly.** While not essential to protecting water quality, locating property boundaries is common sense and good planning. There may be survey pins, blazes, wire fences, or stone walls that mark boundaries or property corners. Forest type maps, soil or topographic maps, or aerial photos help, too.



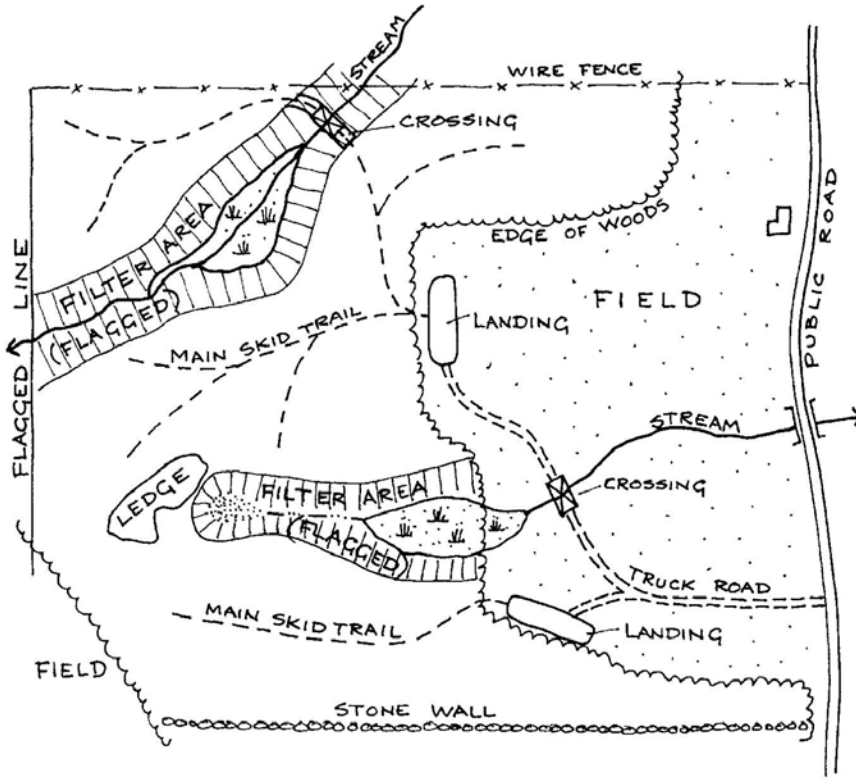
Example of a map showing planning and layout on a large lot.

When in doubt, stop! Get more information or professional advice. Call The Maine Forest Service at (800) 367-0223 (in-state only) or (207) 287-2791 for answers and referrals to professionals who can help.

- **Identify streams, lakes or ponds, wetlands, and other features on maps and on the ground.** Maps and aerial photographs can help identify features like waterbodies, steep slopes, or poorly drained soils. Walking the property to locate important features on the ground is essential. If possible, do your planning on bare ground in wet seasons when surface water is visible.
- **Identify the areas where you need BMPs.** Forest harvesting BMPs are most critical in and immediately next to waterbodies including intermittent and perennial streams, lakes or ponds, wetlands and coastal areas—wherever direct impacts to surface water may occur. You may also need to use BMPs in other areas of the watershed where flowing water could be substantially altered or carry sediment into these waterbodies.
- **Lay out the harvest operation on the ground.** Harvest planning includes determining where operational features such as roads, stream crossings, landings, cut-and-fill areas, main skid trails, and particular BMPs will be needed. While on-site, make sure everyone involved in the harvest operation is aware of the layout—especially roads, skid trails, and filter areas next to waterbodies.



There is no substitute for laying out the harvest operation on the ground.



Example of a map showing planning and layout on a small lot.

- **Choose BMPs that are appropriate to the site conditions.** Most sedimentation occurs during short periods of heavy rain or snowmelt. How much rain falls during a storm, how much water streams carry, how stable the soils are, and what type of vegetation is present are all conditions that vary. BMPs that are sited, designed, and installed to anticipate adverse conditions work best.

- **Decide on BMPs for the entire harvest area and for closeout before beginning work.** BMP systems need not be complicated, but they require planning across the entire harvest area and over the entire duration of the operation, including closeout. Applying BMPs in one location can sometimes solve problems elsewhere on the site, or prevent problems after the operation is complete. When you understand the natural drainage system in the watershed, often you can use a combination of simple BMPs that are more effective— and cheaper—than more complex or expensive techniques.

- **Consider the needs of future operations on the same** property. Will roads, trails and landings be used again in five years, 15 years, or longer? Are there other areas of the property that can be accessed using the same roads? If you need to access the lot in the future, plan roads and trails accordingly. Otherwise, consider restricting vehicle access after the harvest. Because of the possibility of extreme weather conditions, it is important to design and close out roads properly. Identify which structures—such as culverts—will be left in place, and which will be removed. Considering the future can avoid problems and costly solutions.

3. ANTICIPATE SITE CONDITIONS

- **Time operations appropriately.** Harvesting under frozen, snow-covered, or dry conditions can minimize the need for additional BMPs. At the same time, a range of BMPs that are appropriately chosen, installed, and maintained can extend the harvest season. Use extra caution during fall and spring when streams are high and the ground is typically wetter—you may need to use additional BMPs to control the larger volume of water.

BMPs may extend the harvest season, reduce equipment wear and the amount of mud on logs, increase skidding efficiency, and protect your investment in roads and stream crossings.



Site conditions both during and after the harvest are likely to change.

- **Determine whether previous operations in the harvest area created conditions that are impacting—or could impact—water quality.** Old roads, log landings, and skid trails can be reused or upgraded. However, in some situations, avoiding or retiring them is a better choice. Using old roads, landings, and trails may be cheaper in the short run, but may be more costly to fix or maintain later. Pre-existing conditions may also influence your choice of BMPs.

- **Plan to monitor, maintain, and adjust BMPs as needed, especially to deal with seasonal or weather-related changes.** After installation, many BMPs require maintenance or modification. Conditions—such as the amount of water flowing in streams, soil moisture, or the depth of frost—can change quickly, even with one storm. Take into account how conditions may change, and maintain or install additional BMPs as needed. Determine who will be responsible for this work. In many instances, the landowner will want to periodically check and maintain BMPs that have been installed after harvesting is done. This often prevents washouts and a loss of access while protecting water quality at the same time.

4. CONTROL WATER FLOW

- **Understand how water moves within and around the harvest area, and decide how water flow will be controlled.** Concentrated flows of water on roads, skid trails, landings, and in drainage systems develop more force and a greater ability to erode soil and carry sediment. It is easiest and most effective to control small volumes of water, before they converge and accumulate into concentrated flows.

- **Slow down runoff and spread it out.** Many BMPs work by directing small amounts of water into areas of undisturbed forest floor where it can be absorbed.



Properly sized ditches capture and slow down runoff.

- **Protect the natural movement of water through wetlands.** Wetlands play an important role in the environment by storing water in wet periods and slowly releasing it back into the surrounding ground and streams. Logging roads and trail crossings can affect the flow of water within or through a wetland. This changes how much water the wetland stores, the degree of flooding that occurs, and the rate at which water leaves the wetland. Such impacts can affect the health of the wetland and waterbodies downstream.

5. MINIMIZE AND STABILIZE EXPOSED SOIL

Limiting soil disturbance and stabilizing areas where mineral soil is exposed are among the most important BMPs for preventing erosion. These practices are most critical in and around filter areas—forest areas bordering waterbodies. A detailed discussion of filter areas, how best to work in them, and soil stabilization starts on page 22. Generally speaking, there are two major objectives:

- **Minimize disturbance of the forest floor, especially in filter areas.** The forest floor absorbs water and filters out sediment and other pollutants. Exposed soil, on the other hand, can erode very rapidly. Most of the sediment that ends up in streams near managed forests comes from exposed soil on roads, landings, and skid trails. Know where the filter areas are and how to protect their capacity to absorb and filter runoff.
- **Stabilize areas of exposed soil within filter areas and in other locations where runoff has the potential to reach filter areas.** Use BMPs during or immediately after the harvest to prevent exposed soil or fill from eroding. These techniques and materials can be used near waterbodies, at stream crossings, road cut-and-fills, ditches, landings, and skid trails. In some situations, you may need to seed and/or plant vegetation in order to stabilize the soil.

6. PROTECT THE INTEGRITY OF WATERBODIES

- **Protect stream channels and banks.** Blocking or altering streams (with slash, for instance) may keep fish from swimming past the blockage. Damaged stream banks erode quickly, causing sedimentation and siltation. By protecting the physical integrity of streams, BMPs prevent these problems.
- **Leave enough shoreland vegetation to maintain water quality.** BMPs maintain the benefits that nearby trees and plants provide waterbodies. Streamside vegetation shades the water, minimizing temperature changes. Live roots stabilize the banks and maintain the soil's physical and chemical properties. Trees along the banks drop leaf litter and woody debris that supply nutrients and become habitat for plants and animals in the stream. Shoreland vegetation plays an important role in maintaining water quality.

7. HANDLE HAZARDOUS MATERIALS SAFELY



For assistance with spills of hazardous materials, call the Department of Environmental Protection's Division of Response Services office nearest you:

Augusta (207) 287-7688
Bangor (207) 941-4570
Presque Isle (207) 764-0477
Portland (207) 822-6300

In an emergency, call
(800) 482-0777 (oils/fuels)
(800) 452-4664 (other chemicals)

- **Be prepared for any emergency.** Keep an emergency response kit and contact information at the site for fuel, oil, or chemical spills. Remember that fertilizers, herbicides, pesticides, and road chemicals (calcium chloride, road salt, etc.) are hazardous materials, too. Know whom to call for help with unexpected erosion, accidents, or other emergencies. Having a backup plan and being prepared for unexpected and special situations can help avoid or minimize negative impacts to water quality. Industry groups, equipment suppliers, and local and state government agencies all have specialists available to help. Refer to "Section 4. For More Information" on page 94 for agency names, addresses, and telephone numbers.

- **Use and store hazardous materials properly.** The best way to avoid accidental spills of hazardous materials is to store and handle them so that the chance of these types of emergencies occurring is minimized. You'll find several BMPs in this manual that describe how to do this, starting on page 90.

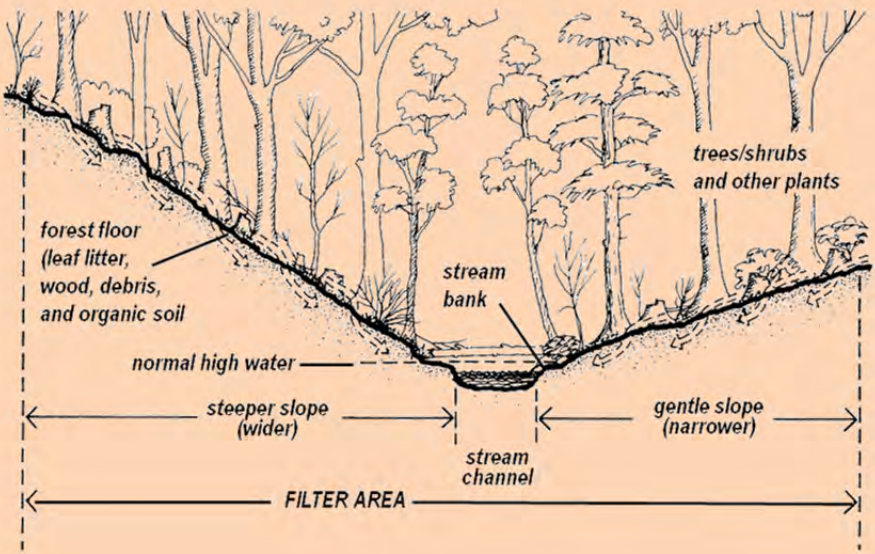
KEY ISSUE

Filter Areas

Filter areas, broadly speaking, are forested areas bordering waterbodies that provide important functions, especially filtering sediment and debris from runoff and preventing pollutants from reaching waterbodies. Filter areas have several components.

- The **banks** of streams (or other waterbodies) protect and contain the water channel.
- The **forest floor**—especially the leaf litter, woody debris, and organic soil layer—absorbs and filters water as it moves over and through the soil.
- **Trees and other vegetation** shade the water (minimizing changes in water temperature), stabilize the banks, and add woody debris and organic matter to the water and forest floor.

Limiting impacts to these components within a minimum distance from the waterbody (depending on slope) typically maintains these benefits and protects water quality.



WORKING IN FILTER AREAS

Forested filter areas are not "no-harvest" zones; you can often cut within them. You may also use logging equipment in filter areas if the forest floor is protected. However, it is important that you take extra precautions within filter areas to prevent water pollution.

Note that the filter areas described here may be wider or narrower than regulatory requirements for forestry activities.

Table A
Minimum Filter Area Width

Slope (%)	Width from High Water Mark (ft.)
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70+	165

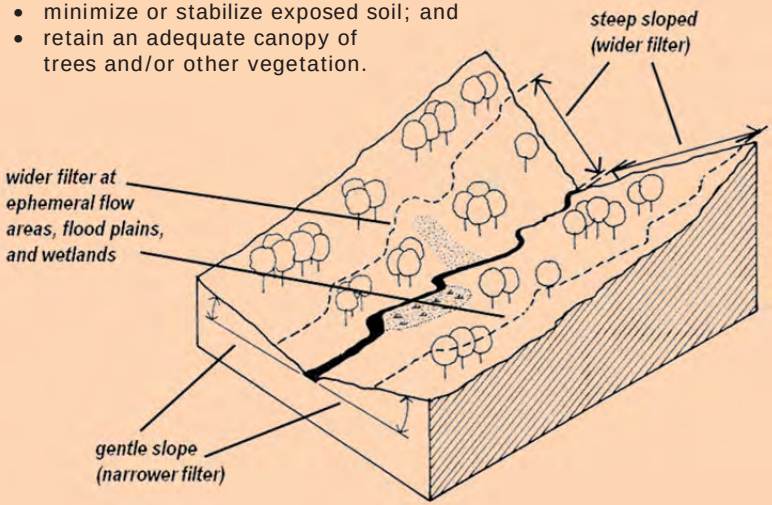
BMPs

1. **Determine what legal requirements you must meet when working near waterbodies.**

2. **Delineate filter areas next to streams, lakes and ponds, and non-forested wetlands.** Minimum recommended widths (from the normal high water mark) for filter areas appear in Table A.

3. **Apply BMP techniques for roads, landings and skid trails (described in later sections) when working in filter areas to:**

   - minimize damage to the stream channel and stream banks;
   - protect the forest floor next to streams and other waterbodies from disturbance;
   - disperse concentrated flows of water through the area;
   - minimize or stabilize exposed soil; and
   - retain an adequate canopy of trees and/or other vegetation.



The minimum filter width varies with slope and site conditions.

4 **Increase the width of the filter area and install more BMPs when local conditions call for it.** The recommended minimum filter area widths are based on the ability of the undisturbed forest floor to absorb water and filter sediment. The actual width needed for the filter area to be effective may be greater than the minimums listed in Table A, depending on the site conditions and planned activity. Examples of situations where it is best to designate a filter area wider than that stated in Table A include:

- **Ephemeral flow areas next to waterbodies.** Water from ephemeral flow areas may carry sediment or other materials directly into streams (especially during wetter seasons).
- **Forested wetlands and floodplains next to waterbodies.** Typically, these are wetter, weaker soils. They are more likely to develop ruts and produce rapid runoff into nearby waterbodies.
- **Water diversions that concentrate flow.** Culverts, ditches, and other drainage structures may increase the amount of water flowing into the filter area. They could also create a new channel through the filter area, reducing its effectiveness. In these cases, increasing the filter area width and making sure the drainage structures and BMPs are properly installed will help disperse the water.
- **Some stand conditions.** Some sites may warrant wider filter areas to maintain the wind-firmness of the stand or provide adequate shade on the waterbody.



Forest harvesting operations in both non-forested and forested wetlands may have legal requirements. However, the definitions of forested and non-forested wetlands vary in different federal, state, and local laws. Forestry activities may be exempt in some cases, but not in all. Know which law applies to your situation.

KEY ISSUE

Stabilization

STABILIZING EXPOSED SOIL

Stabilizing exposed soil is most important where sediment can be carried to waterbodies. Different materials may be used to reduce erosion on exposed soils. Temporary materials are often ones that will rot and/or that will be replaced by natural vegetation. Permanent stabilization is provided by long-lasting, sturdy vegetation, stone or artificial materials designed to withstand the force of moving water. Often, stabilization materials are used in combination with each other, providing both immediate, temporary stabilization and permanent revegetation.

TEMPORARY MATERIALS

Hay or **straw mulch** can help minimize soil movement, and usually lasts one or two seasons, holding the soil until the natural vegetation grows back. Mulch is often used after seeding exposed soil. Hay and straw are not effective in areas of concentrated flows. Be aware that hay mulch typically contains non-native grass seed, while straw does not.

- When mulching exposed soil with hay or straw, use enough mulch to cover the soil completely or nearly completely. A common guide is approximately 90 lbs of mulch per 1,000 square feet (or about 2 square bales for a 30 x 30 foot area). On steep slopes (greater than 4:1 or 25%) or exposed windy sites, it may be necessary to anchor the mulch with staples, netting, or twine.



Hay mulch on a landing.

Brush, slash, and tops from harvesting are often readily available, and are an excellent means of stabilizing exposed soils until the area revegetates naturally. Brush typically does not need to be removed except if it falls below the normal high water mark of waterbodies.

- Use brush on trails that could erode and deliver sediment to streams. Wherever possible, put brush down before the soil becomes disturbed and the soil exposed. The more brush, the better.
- Use brush as a berm on the lower shoulder of roads running across slopes to help stabilize exposed soil and disperse water being shed off the road.
- Use brush on landings or similar high traffic areas (if it will not present a hazard to equipment).
- Use brush at the outfall of road culverts, dips, water bars, and other drainage structures to help hold the soil and disperse concentrated runoff.



Harvesting during frozen winter conditions and putting slash in the skid trails are both excellent ways to limit soil disturbance.

Seeding grasses that will establish themselves quickly can help minimize erosion of exposed soil. Temporary seeding works best on slopes less than 4:1 (25%). The recommended grasses for temporary seeding include winter rye (110 lbs/acre), oats (80 lbs/acre), or annual ryegrass (40 lbs/acre). See "Seeding," page 29, for instructions on how to sow seed.

Temporary erosion control blankets are available in rolls and are made of a wide variety of materials. Usually they are biodegradable. They are often used with grass seed to establish vegetation as the blankets rot. Erosion control blankets must be in contact with the soil to prevent water flowing between the blanket and the soil. On slopes greater than 4:1, blankets may need to be anchored with staples or by other means. Blankets work best in ditch and swale sections (where there is concentrated runoff) when the slopes are gentle.

PERMANENT MATERIALS

Wood chips, waste wood, or bark mulch may last several seasons, depending on the material and its depth. Occasionally, these materials are combined with soil in an erosion control mix. Spread the material to a depth of 2–6 inches, primarily on slopes less than 4:1 (25%). Wood chips, waste wood, and bark mulch are not recommended in areas of concentrated water flow or where they may be subject to wind erosion.

Permanent erosion control blankets are usually made of synthetic materials and are used in high-flow areas such as ditches.

Gravel can provide adequate stabilization, especially on travel surfaces with low slopes and little concentrated flow. Ideally, gravel used in critical areas is screened and/or washed to remove the fines.

Riprap or cobbles are larger stones used to stabilize ditches, heavily traveled areas, and areas of high flow. They are also used to armor steep slopes (up to 1.5:1 or 67%) and culvert inlets and outlets. You can use riprap in combination with erosion control blankets to prevent flowing water from undercutting steep slopes. Use very large stone in combination with smaller cobbles and/or blankets.

Permanent vegetation or revegetation is commonly used to permanently stabilize disturbed areas. Permanent vegetation may include grasses, shrubs, and/or trees. Seeding is recommended on exposed soils within filter areas, at waterbody crossings, and at similar critical sites that are not stabilized by other means. Most other areas will reseed naturally within two years, provided BMPs have been used to control the water flow.



Hay mulch holds exposed soil while grass becomes established.

Wide varieties of seed mixtures for permanent revegetation are available. Usually, they contain combinations of creeping red fescue, annual ryegrass, tall fescue, flatpea, switchgrass, bluestem, deertongue, and other species. Commercially available "Conservation Mix" is often appropriate. A typical mix consists of: creeping red fescue (40%); annual ryegrass (31%); Dutch white clover (20%); birdsfoot trefoil (5%); and hairy vetch (4%). Select a seed mixture based on:

- the site conditions;
- how quickly the soil needs to be stabilized to avoid sedimentation;
- the time of year and predictable weather conditions;
- the soil's moisture and fertility; and
- shade conditions.

Native, non-invasive grass species are preferable if they are available and affordable.

For more detailed and site-specific recommendations, see the USDA Natural Resource Conservation Service's guidelines for Critical Area Planting, Section IV of their Field Office Technical Guide, referenced on the inside back cover.

SEEDING

Whether you are seeding for temporary or permanent vegetation, the sowing process is the same.

Use fertilizer with care near waterbodies, and never put it directly in any waterbody.

- Prepare the seedbed (if necessary) by raking, grading, removing debris, and/or smoothing the exposed topsoil.
- Apply the seed mix immediately after preparing the seedbed, at the supplier's recommended rate (generally from 20–50 pounds per acre) by hand, seed spreader, or hydro-seeder.
- If possible, apply seed in the spring, fall, or after rain to help ensure germination.
- Consider liming and fertilizing the site before seeding, based on soil conditions, or if it is recommended by the seed supplier. Fertilizer-coated seed mixtures may also be available. A few seed types, such as legumes, require inoculants (available from the supplier) in order to become established.
- On critical areas (near waterbodies), dry soils, highly erodible sites, or sites seeded during the summer, mulch the seeded area with hay or straw.
- Do not allow vehicles or heavy foot traffic in areas that have been seeded until the cover is well established.



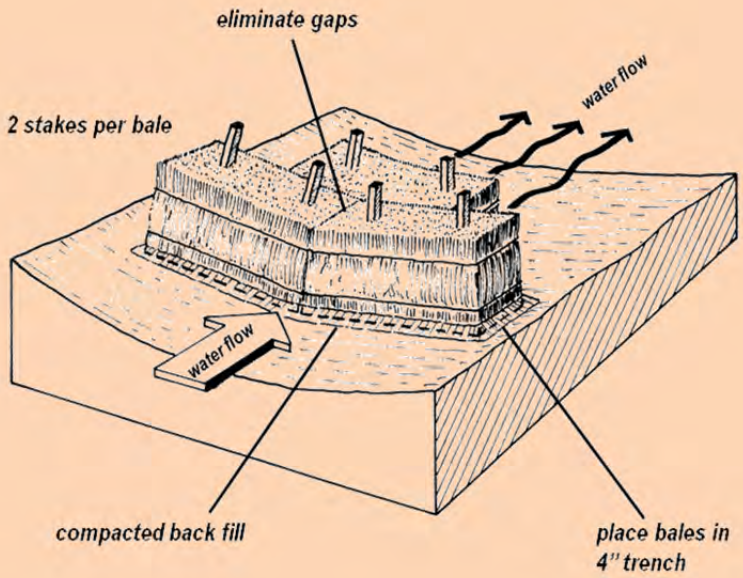
Seeding with grass seed will help stabilize exposed soil, often within a single growing season.

TEMPORARY SEDIMENT BARRIERS

Temporary sediment barriers such as hay bales and filter fences are used to trap sediment during the construction of roads, ditches, and BMPs until other measures, especially permanent vegetation, can be installed. Hay bales and silt fences are not intended as permanent structures and should be removed during closeout or after the site has stabilized.

HAY BALE INSTALLATION

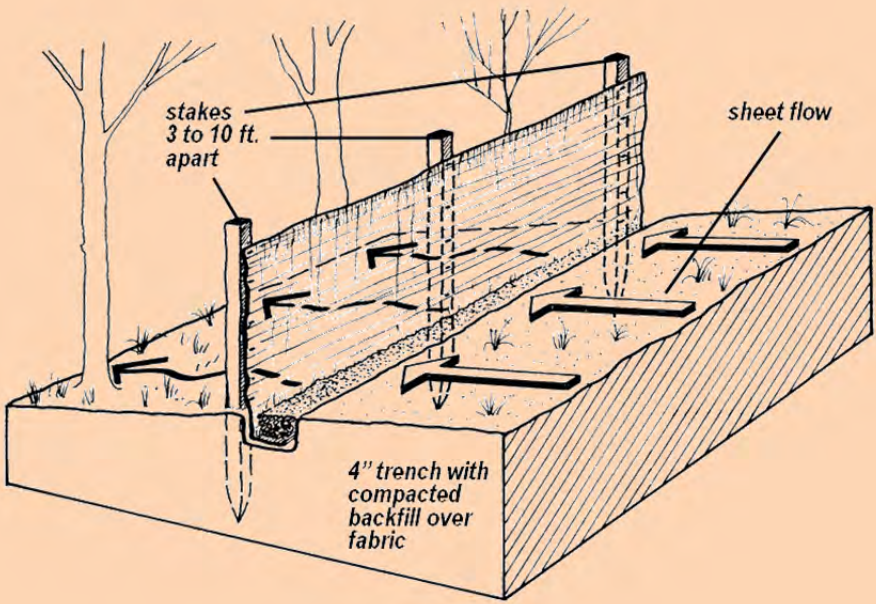
- Excavate a trench 4 inches deep and the width of the bale;
- position the hay bales in a single row or stagger them, making sure there are no gaps between the bales where water could flow through;
- place the bales in the trench and stake with at least two stakes per bale; and
- backfill with soil on the uphill side to keep water from flowing underneath the bale.



FILTER FENCE INSTALLATION

- Install a synthetic filter fence by first setting stakes at least every 3–10 feet. Three feet is needed for light fabric, while 10 feet is adequate when using extra strength fabric and/or a wire mesh support fence.
- Follow the manufacturer's recommendations and choose a filter fabric capable of handling the expected water flow. The fabric may be 15-36 inches high.
- Excavate a 4-inch deep trench upslope, along the line of stakes.
- Place an 8-inch skirt of fabric in the trench; staple the other side of the fabric to the stakes; then backfill and compact the soil.

Hay bales and filter fences are temporary measures. Remember to remove them after the harvest, or when the site has stabilized.



BMPs FOR EVERY STAGE OF THE HARVEST

The remaining sections of this manual cover specific Best Management Practices that are appropriate for a variety of situations or stages of a harvest operation. All are techniques that are intended as steps toward achieving one or more of the Fundamental BMPs listed in the previous section.

The specific BMPs you select in any given situation will depend on a range of factors: the site itself—including terrain, slope, soils, and location in the watershed—as well as the forest stand type, equipment, materials, and experience. The following guidelines are applicable in many situations. However, specific practices may need to be implemented in unique combinations, modified for particular circumstances or incorporate new technology or research in order to meet the objectives of the Fundamental BMPs.





HIGHEST PRIORITIES

- **Minimize damage to the streambed and banks.**
- **Avoid altering the channel or restricting the flow of water.**
- **Maintain fish passage.**
- **Minimize and stabilize exposed soil on crossing approaches.**
- **Control runoff on approaches.**
- **Close out the crossing properly.**

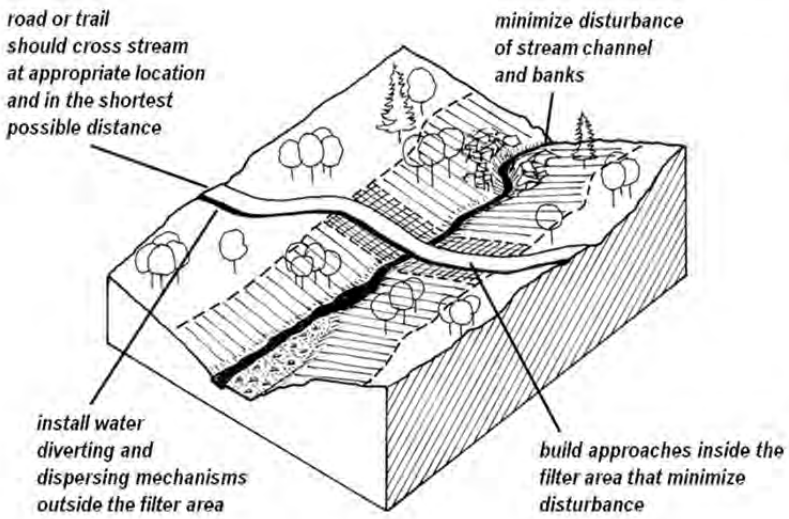
STREAM CROSSINGS

Stream crossings can have a significant negative impact on water quality. However, these impacts can be minimized by making sure your temporary and permanent crossings are properly installed.

STOP Some laws limit the use of "temporary" crossings to a few months, require permits, and/or require certain measures or design features.

Stream crossings encompass the entire section of a road or skid trail as it crosses the filter area on both sides of the stream, including:

- the channel itself;
- the stream banks; and
- the road or trail approaches (at a minimum, a length equal to the recommended width of the filter area at that point).



Stream crossings typically require consideration of several factors.

There are two types of crossings, temporary and permanent:

Temporary crossings are generally in place for up to several months. Stream crossings on trails used by skidders, forwarders, and other yarding and felling equipment are usually temporary.

Permanent stream crossings are intended to be in place for many years. Truck road crossings, for example, are often permanent and require careful design, installation, and long-term periodic maintenance. Permanent crossings are occasionally used for skidding or forwarding, but usually only if there are other access needs for the crossing.



A temporary bridge on a winter skid trail.



A permanent bridge.

PLAN AHEAD

Plan stream crossings before road construction, trail layout, and harvesting begin.

Crossings on streams with fish may be required to allow fish passage. See page 41 for general fish passage guidelines. Call the Maine Department of Inland Fisheries and Wildlife for help identifying streams with fish habitat at (207) 287-8000.

BMPs

1 **Determine if a temporary or permanent crossing is needed. Select the type of crossing that best matches the site and stream characteristics, and the need for access.** If you don't need permanent access, properly installed temporary crossings may have less of an impact on water quality.

Temporary stream crossings include:

- portable bridges,
- temporary culverts or pipe arches,
- logs or pole fords, or
- brush.

Use temporary structures to keep equipment out of flowing water, to prevent sediment from entering the water, and/or to protect the banks and stream bottom. Portable, removable structures such as bridges, mats, and culverts (when they are installed without additional fill) have the advantage of being reusable.



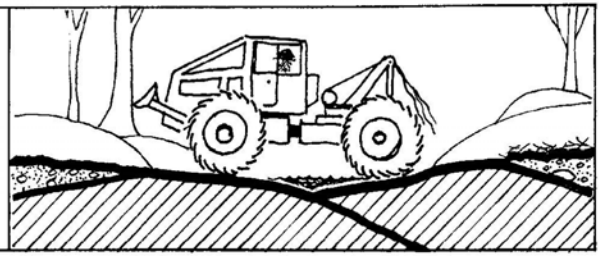
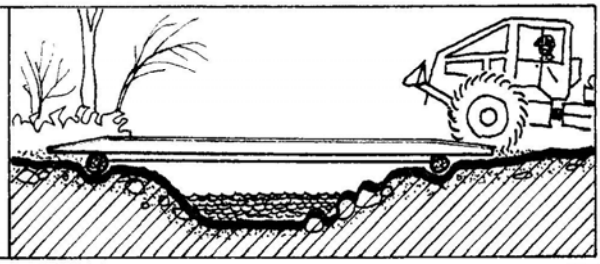
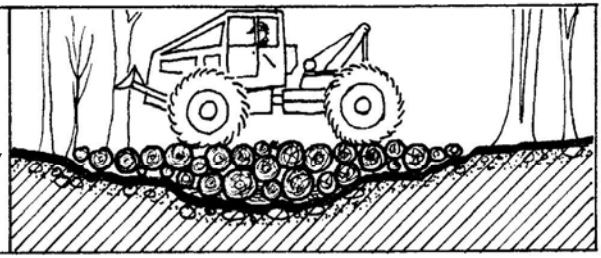
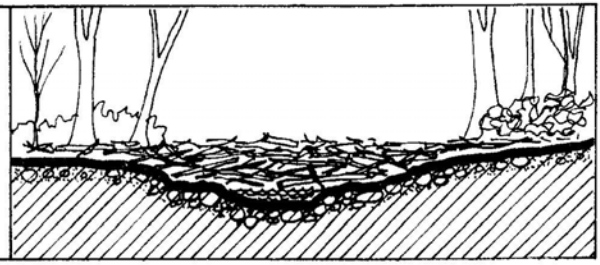
Temporary culvert crossing of a small intermittent stream using slash.

PLAN AHEAD

You may not need to use a structure at a temporary stream crossing if sedimentation can be avoided and the stream bottom and banks will not be disturbed. For example, you can use:

- natural fords—locations where the banks and stream bottom are ledge or rocky; or
- winter crossings when frozen conditions prevent sedimentation and stream channel disturbance.

Types of temporary crossings

NATURAL FORD ***— stream flows over rock or ledge***	
TEMPORARY/ PORTABLE BRIDGE ***— protect/stabilize stream bank***	
LOG OR POLE FORD ***— protect bank and channel*** ***— maintain water flow*** ***— remove at closeout***	
SLASH/BRUSH ***— protect bank and channel*** ***— maintain stream flow*** ***— remove at closeout***	

PLAN AHEAD

Permanent stream crossings are most often used on haul roads, and include:

- bridges,
- culverts,
- pipe arches, or
- stone fords.

Types of permanent crossings



A permanent bridge on a truck road.



An old stone culvert still functioning.

PLAN AHEAD

BMPs

2 Select appropriate crossing locations, based on site and stream conditions.

- Minimize the number of stream crossings needed and maximize the harvest area accessed by each crossing. By locating all of the crossings during the planning stage, you may be able to reduce the number of crossings needed. Decide whether the amount of wood you gain access to justifies a crossing.
- Identify the best available sites for stream crossings. Look for:
  - relatively straight, narrow channels, and stable stream sections;
  - level or gently sloping banks and approaches (on both sides) that are stable;
  - approaches that are more or less at right angles to the channel;
  - hard stream bottom (for crossings where the structure rests on the stream bottom, e.g., pole fords or slash); and
  - areas away from important fish spawning habitat.
- Install crossings when the soil is dry or frozen and the water level is low.
- Minimize impacts to gravel or cobble streambeds where fish may spawn (especially from late fall to spring when you could harm incubating fish eggs).

See the section on "How to Size and Install Bridges and Culverts" on page 47.

PLAN AHEAD



Know what legal requirements, minimum opening sizes, and permits apply for each location and stream crossing type.

BMPs

3. **Select a type of crossing structure that is appropriate for the stream and the adjacent terrain.** Is there a floodplain or wide, flat wetland next to the stream? These are evidence that the stream floods frequently, and you will need to plan the crossing accordingly. Install additional overflow pipes, dips, or other structures to prevent the crossing from washing out at high flows. Also, keep in mind that the type of crossing structure will affect the efficiency of water flow. Culverts may be preferred in narrow, deep gullies or on V-shaped, steep-sided channels. Bridges or box culverts are suited for wider streams with low, flat banks.

4. **Base the opening size on the highest expected stream flows.** Size stream crossings appropriately to reduce the chance that high water levels will undermine or wash out the crossing. Washouts cause erosion and damage the stream. Moreover, repairing or replacing a bridge or culvert is a significant cost, and one that can usually be avoided (see the section on “How to Size and Install Bridges and Culverts,” page 47).

5. **Determine the maintenance and closeout needs, and who will be responsible for these tasks**. A well-built stream crossing is an investment that minimizes your risk of causing sedimentation and can assure long-term access. Protect that investment by knowing in advance how it will be maintained and closed out.

KEY ISSUE

Fish Passage

Stream Smart Crossing

Designing and installing stream crossings that function effectively for road infrastructure while maintaining fish passage is becoming increasingly important. Crossings designed using the **4 "Stream Smart" principles** allow for adequate capacity for high flows, minimize sedimentation of the stream and provide passage for fish and other aquatic life.

Crossings on streams with fish are required by law to allow fish passage. Call the Maine Dept. of Inland Fisheries and Wildlife for help identifying streams with fish habitat at (207) 287-8000.

Principle #1 – Span the Stream Channel

A crossing that is narrower than the natural stream channel can "pinch" the stream, causing water flow to accelerate through the crossing. This can create a barrier to fish movement, as water may move faster than a fish can swim. In addition, when accelerated water flow exits a culvert that is too narrow, it will create a scour hole. This will cause the culvert to become perched above the streambed, which also limits fish passage. Crossings that are at least as wide as the stream channel allow natural flows to be maintained through the crossing, minimizing velocity problems. In *most* cases a crossing sized to be as wide as the stream channel will also accommodate at least a 50 year flood.



A culvert that is spanning the stream channel.

Principle #2 – Set the Crossing at the Correct Elevation

Stream crossings, including closed bottom culverts and footers of open bottom structures, should be set below the elevation of the **ORIGINAL** stream channel. This is particularly important to be aware of when replacing a stream crossing, since old crossings are often set at too high an elevation. A stream crossing that has not been set at the correct elevation limits fish passage and may pond water on the upstream side, which in time may compromise the road.



Water ponded upstream of an old crossing is a good indication that the crossing is set too high.

Principle #3 – Slope Matches the Stream

Crossings should be set at the same gradient as the natural stream channel. This allows the stream to maintain its natural velocity and minimizes problems such as scour holes below the crossing.

Principle #4 – Substrate in the Crossing

Open bottom crossings such as bridges and arch culverts are open to the natural stream bottom. Properly sized and embedded closed bottom culverts can have a stream bottom redevelop in the crossing as stream bed material accumulates. Material may need to be added to culverts, particularly on steeper streams.



A culvert installed to stream smart principles that is accumulating substrate

Tip: The width of the opening for a bridge or culvert should be at least as wide as the stream channel at the normal high water mark. Sizing a crossing only based on the 10 or 25 year flood (see page 48-49) may not always accomplish this goal.

BMPs

1. **Minimize "velocity barriers" by maintaining natural rates of stream flow.** Culverts that constrict flows can increase water speeds beyond the swimming ability of some fish species. Design a culvert's shape, slope, size, and outlet so that the stream's natural rate of flow is preserved and fish can swim upstream through the culvert.

2. **Minimize "low-flow barriers" by maintaining adequate flows in culverts.** Multiple culverts or other designs that spread out flow or broaden the channel may result in water that is too shallow for fish to pass through, especially during summer.

3. **Minimize "exhaustion barriers" to fish.** Culverts that are long, steep, or provide no resting areas may tire fish enough to prevent them from passing through.

4. **Minimize "jump barriers".** Culvert outlets that are set too high ("hanging culverts") can prevent fish from entering the culvert. In addition, outlets that scour the stream channel can create fish barriers over time as the streambed is washed out and lowered.

5. **Minimize "debris barriers".** Woody material that accumulates at the inlet of undersized culverts can sometimes obstruct passage. Adequately sized crossings may allow debris to pass through, but culverts require regular maintenance to prevent obstructions.

6. **Consider possible "behavioral barriers" when choosing the culvert type and material.** The type of culvert bottom may discourage some species of fish from passing over or near them because of specific behavioral traits.

Incorporating these principles into the design of stream crossings can reduce the likelihood of creating barriers to fish. For most stream crossing situations, fish passage can be provided by making sure that:

- structures (bridges and culverts) are at least as wide as the stream channel at normal high water mark;
- culverts are embedded slightly (5-25% of their diameter) in the stream substrate; and
- a natural stream bottom is retained or redevelops within the structure after installation.



Tip: Sediment can collect up stream of undersized stream crossings raising the stream bed elevation. When replacing existing crossings, the new culvert or footings should usually be embedded below the original stream bed elevation. See references (back cover) for more information.

BUILD IT RIGHT

Properly installed water crossings preserve water quality, protect your investment in the crossing, and reduce future maintenance costs.

ALL STREAM CROSSINGS

BMPs

1. **Minimize disturbance to the stream banks, channel, and streambed during installation, use, and removal.**
2. **Minimize and stabilize exposed soils on the approaches within the filter area.** During operations, you can stabilize the approaches with brush or other materials.
3. **Install diversions on the approaches to prevent channeled runoff from entering the stream from the trail or road, and to disperse it into adequate filter areas.**
4. **Build the narrowest roads and trails possible in the filter area and at the crossing.**
5. **Do not obstruct water flow or fish passage in the stream. See the guidelines for fish passage on page 41. Install culverts with the bottom resting on or below the stream bed at the inlet and outlet.**
6. **Minimize work during wet weather or when the soil is saturated.**

TEMPORARY CROSSINGS

BMPs

1. **Stabilize crossing approaches with brush or similar materials, before and during operations.**
2. **Protect the approaches by extending temporary bridges well beyond the stream bank.**
3. **Install any temporary, portable bridges so that all portions of the bridge are above the stream's normal high water mark. Keep abutments back from the banks, if possible.**



A pole ford.



A temporary bridge.

BUILD IT RIGHT

PERMANENT CROSSINGS

BMPs

1. **If possible, build crossings when streams are dry or at low water. If considerable excavation is necessary during periods of regular or high flow, temporarily divert the water while installing the crossings.**

STOP Permanent crossings may require permits, especially if water must be diverted during installation.

2. **Install crossings and approaches using a "no-grub zone" at least the width of the filter area, wherever possible.**
   - Minimize excavation on stream banks and approaches.
   - Construct road approaches using fill (instead of grubbing), leaving the forest floor undisturbed, especially outside the road profile. Consider surfacing with clean gravel or stone. This will stabilize the road surface, prevent it from eroding directly into the stream, and keep mud from being tracked onto the crossing structure.
   - Use geotextile and fill on unstable soils or during wet weather.
   - Set abutments back from the stream's edge.

3. **Design bridges using solid decking or other features to minimize the amount of material that falls through the deck and into the stream.**





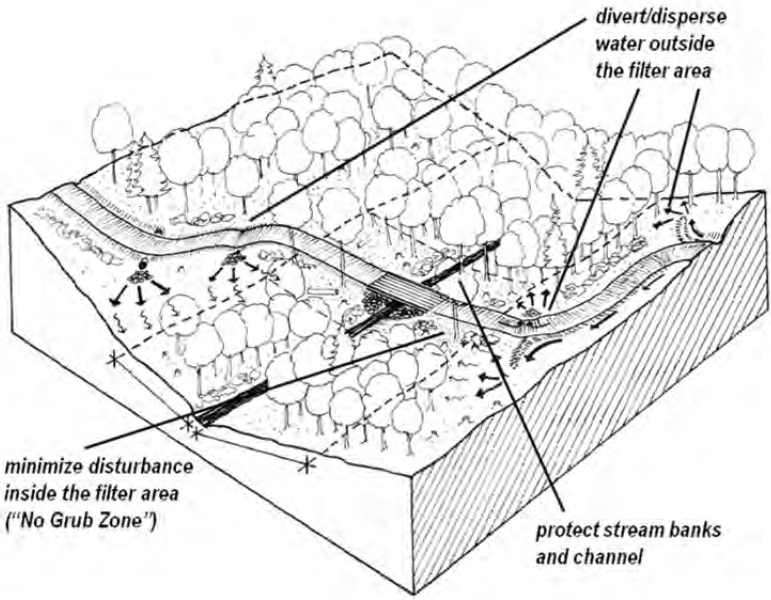
Two types of permanent crossings.

BUILD IT RIGHT

BMPs

4. **Road ditches should not terminate in the stream. Use a broad-based drainage dip or similar structure to divert and disperse water off the road just outside the filter area to the undisturbed forest floor.**

5. **Seed and mulch exposed soil on approaches within the filter area (outside the roadbed). This should be done during or immediately after the road installation, in spring, or in early fall—follow the recommendation of the seed supplier. See p. 29 for more information on seeding.**



A permanent stream crossing that minimizes water quality impacts.

KEY ISSUE: HOW TO SIZE AND INSTALL

Bridges and Culverts

Properly sizing and installing bridges and culverts in stream crossings is very important. Doing so will prevent these structures from failing or washing out, requiring expensive repairs or rebuilding. Moreover, washouts can significantly impact a stream's water quality.

STOP Before designing bridges or culverts, know which legal standards apply and what permits may be required.

Planning a stream crossing involves selecting the best crossing location and type of crossing structure. The size of the bridge or culvert will be based on the opening size needed for the size of the stream you are crossing.

STEP 1:

Determine the degree of flooding the crossing must handle without being damaged or washed out. This will depend on what type of crossing you want and how long you anticipate the crossing to be in place. The longer a crossing is in place, the larger the flood that is likely to occur at any particular location.

Design the crossing opening to handle at least normal high water (a 1–3 year flood) for:

- temporary trail crossings in place during summer, fall, and/or winter seasons (but not during spring runoff).

Design for at least a 10-year flood event for:

- temporary trail crossings that will remain in place during spring runoff;
- temporary road crossings; and
- permanent trail or road crossings that will be regularly maintained.

A 10-YEAR FLOOD EVENT: the highest flood level a stream is likely to reach, on average, in any 10 year period.

Design for at least a 25-year flood event for:

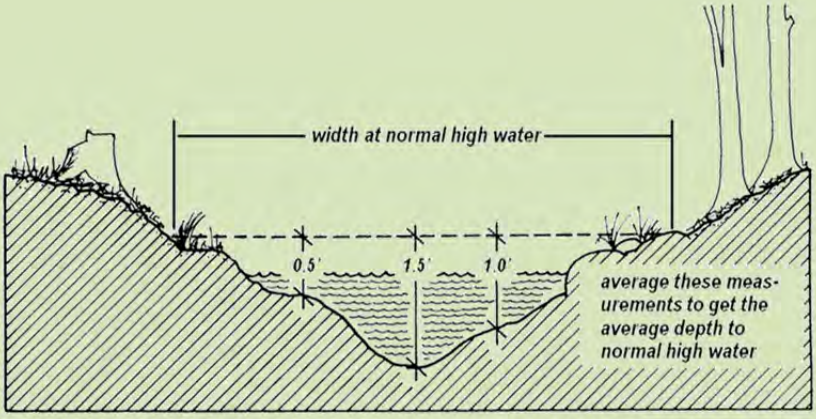
- permanent road crossings that will not be maintained; or
- roads that will be put to bed without removing the crossing.

EXAMPLE: You need to install a crossing that will be temporary, but you won't be able to remove it until after the spring runoff. You are planning to use a round culvert.

SOLUTION: You need to design the crossing for a 10-year flood event.

STEP 2:

Determine the opening size needed to accommodate the expected flood event. The field method described here calculates opening size based on the actual stream dimensions at the crossing location.
Be sure to use streambank evidence to measure at the normal high water mark – not just the existing water level.



- To accommodate **normal high water** (a 1–3 year flood), multiply (width) x (the average depth at normal high water), or keep all temporary bridge components above the normal high water mark.

- For a **10-year flood event**, use Table B1, or multiply (2.5) x (width of the stream at the crossing location at normal high water) x (average depth of the stream at normal high water).

Table B1
10-year Flood Crossing Opening Size (sq. ft.)

Stream Width*	**Average stream depth* (ft.)**			
ft.	**0.5**	**1**	**1.5**	**2**
1	1.25	2.5	3.75	5.0
2	2.5	5.0	7.5	10
3	3.75	7.5	11.3	**15**
4	5.0	10	**15**	**20**
5	6.25	12.5	**18.8**	**25**
6	7.5	**15**	**22.5**	**30**

*** at normal high water mark**
Bold: bridge or arch may be preferred on these larger streams

- For a **25-year flood event**, use Table B2, or multiply (3.5) x (width of the stream at the crossing location at normal high water) x (average depth of the stream at normal high water).

EXAMPLE: The average depth of the stream at your chosen crossing site is (1 ft. + 1.5 ft. + 0.5 ft.) / 3 = 1 ft. You determine the width is 5 feet.

SOLUTION: You use Table B1 because you are designing for a 10-year flood. That table shows that the opening size at the stream crossing should be 12.5 sq. ft.

Table B2
25-year Flood Crossing Opening Size (sq. ft.)

Stream Width*	Average stream depth* (ft.)			
ft.	**0.5**	**1**	**1.5**	**2**
1	1.75	3.5	5.25	7.0
2	3.5	7.0	10.5	**14**
3	5.25	10.5	**15.8**	**21**
4	7.0	**14**	**21**	**28**
5	8.75	**17.5**	**26.3**	**35**
6	10.5	**21**	**31.5**	**42**

*** at normal high water mark**
Bold: bridge or arch may be preferred on these larger streams

STEP 3:

Design the bridge or culvert to meet or exceed the minimum opening size.

- **For bridges or box culverts**, determine a width and height that, multiplied together, produce a result that is at least as great as the square footage you determined you needed in Step 2. Bridges should be installed above the normal high water mark or higher.

- **For round culverts**, select a culvert size using Table C.
  - Find the opening size in the first column that is equal to, or the next size up from the opening size you determined in Step 2.
  - Find the culvert diameter for that opening size in the second column.
  - If you plan to use more than one culvert, be sure the total opening size of all culverts adds up to the minimum opening size you determined in Step 2.

Table C
Culvert Diameter And Opening Sizes

Opening size (sq. ft.)	Diameter (inches)
0.20	6
0.80	12
1.25	15
1.75	18
2.40	21
3.15	24
4.90	30
7.05	36
9.60	42
12.55	48
15.90	54
19.65	60
23.75	66
28.26	72



Tip: To provide adequate fish passage the width of the opening for a bridge or culvert should be at least as wide as the stream channel at the normal high water mark (see page 41). Sizing a crossing only based on the 10 or 25 year flood may not always accomplish this goal.

- **For pipe arches**
  - calculate the required opening size as in Step 2;
  - double the opening size; and
  - use Table C to find the pipe arch diameter for that opening size. (The opening of pipe arches is approximately half that of round culverts of the same diameter). Make sure the diameter is wide enough to install bottomless/half circle arch footings above the normal high water mark.

EXAMPLE: You plan to install a round culvert, so you look for your required opening size of 12.5 sq. ft. in the left column of Table C.

SOLUTION: 12.5 isn't listed, but the next highest number is 12.55. The diameter size listed opposite 12.55 in the right column is 48 inches. This is the size culvert you need.

STEP 4:

Adjust the bridge or culvert size as necessary to:

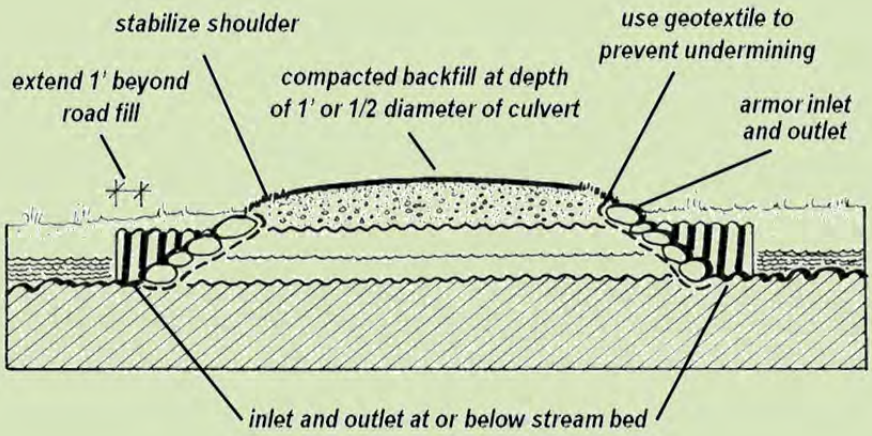
- minimize disturbance to the stream channel and banks;
- allow for unrestricted normal flows; and
- allow fish to pass when water is present.

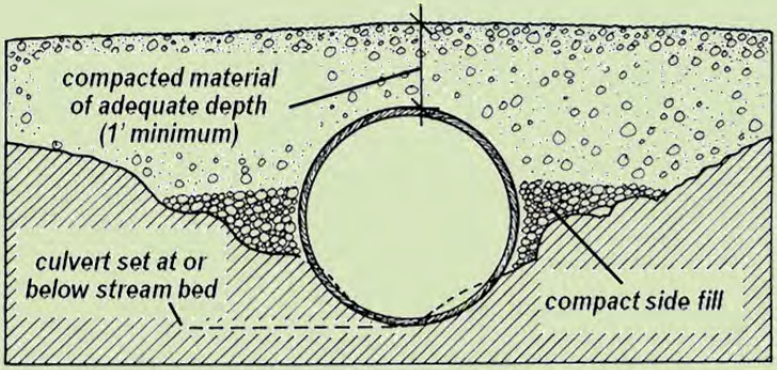
EXAMPLE: This stream has fish in it, and fish passage is required by law. To provide adequate fish passage, the culvert must span the stream.

SOLUTION: The stream was measured at 5 ft. in width. Therefore, a 60 inch culvert would be adequate to provide fish passage.

When installing permanent culverts:

- Set the culverts with the bottoms slightly below the bed of the stream, and at a 2-3% slope. Avoid "hanging" culverts where the bottom of the culvert outlet is above the low water level.
- Extend the culvert inlet and outlet 1 foot or more beyond the fill or roadbed.
- Cover with compacted backfill to a depth equal to half the culvert diameter, or at least 1 foot deep.
- Stabilize the inlet and outlet of culverts and bridges using cobbles, timber abutments, or other armoring.





AS AN ALTERNATIVE to this field method, consider using a hydrological analysis model and/or assistance from a professional engineer, especially for permanent crossings. See the "References" section for more information.

MAINTAIN IT

ON ALL CROSSINGS

BMPs

1. **Do not allow ditches to terminate directly into the stream or the filter area.** Runoff should be dispersed onto the undisturbed forest floor before it reaches the filter area.
2. **Make sure the approaches within the filter area are stabilized**
3. (see “Stabilizing Exposed Soil” on page 25).
4. **When grading or rock-raking approaches, do not drag material onto the crossing.**

TEMPORARY CROSSINGS

BMPs

1. **Stabilize the soil on stream crossing approaches in the filter area by using slash, brush, or log corduroy.**
2. **If there is rutting or channeling on the crossing approaches, disperse the water flow to an undisturbed, stable filter area using water bars or similar structures.**

PERMANENT CROSSINGS

BMPs

1. **Establish a regular monitoring and maintenance schedule for permanent stream crossings.**
2. **Make sure the crossing approaches are not carrying sediment to the stream.** Maintain and restabilize them as needed.
3. **See if the abutments, armoring, and bank stabilization measures are being undermined or damaged, and replace or repair them as necessary.** Severe undermining may indicate a poor location for the crossing, improper sizing, or incorrect installation, and can only be corrected by relocating or redesigning the crossing.
4. **Periodically remove debris and other materials that may block or constrict the culvert or bridge opening.** Using 15"–18" minimum diameter culverts greatly reduces the need for this maintenance work.

CLOSE IT OUT CORRECTLY

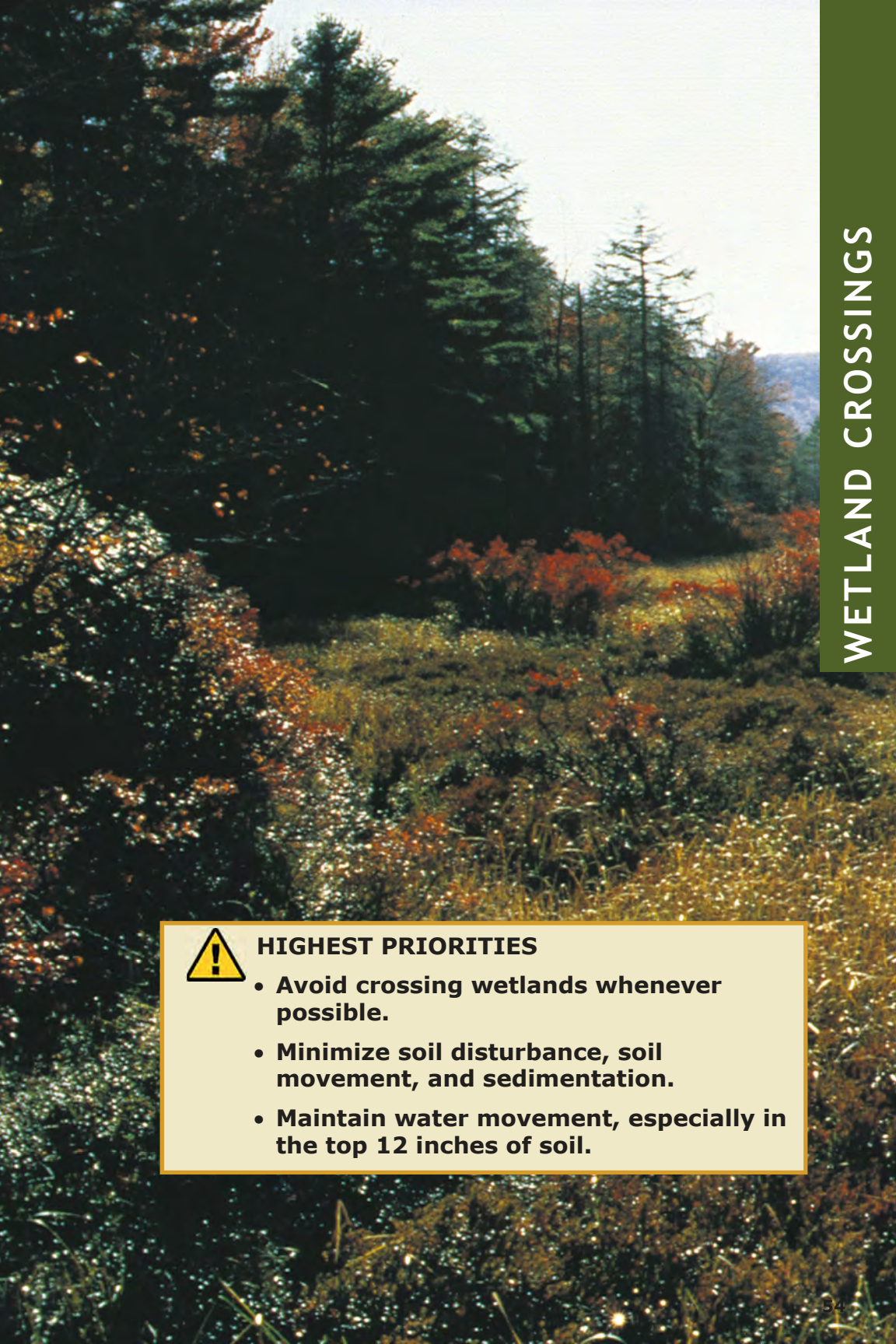
Closeout BMPs will help minimize future damage at both permanent and temporary crossing sites.

BMPs

1. **As a first step, identify the long-term monitoring and maintenance needs appropriate to the harvest site and communicate these to the landowner, forester, and logger.** Determine who will be responsible for these tasks.
2. **Remove temporary structures, slash, and/or other materials from below the normal high water mark when the crossing is no longer used.** Do not remove debris that has fallen into the stream naturally.
3. **Leave brush in place on the approaches and banks (above the normal high water mark) to ensure ongoing stabilization when you closeout.**
4. **Remove bed logs used for temporary bridges unless doing so may cause more disturbance.**
5. **After the harvest, stabilize the remaining exposed soil on the approaches in the filter area.** Use additional brush, hay, or other materials. If large areas are disturbed, spread grass seed and mulch.



Closeout of a temporary stream crossing.



HIGHEST PRIORITIES

- **Avoid crossing wetlands whenever possible.**
- **Minimize soil disturbance, soil movement, and sedimentation.**
- **Maintain water movement, especially in the top 12 inches of soil.**

WETLAND CROSSINGS

Wetlands are areas where soils are saturated or flooded for a significant part of the year, where water-loving plants are found, and where soils have taken on special characteristics (see page 9 for more discussion and examples of wetlands). The large amount of water and organic matter in wetland soils make them difficult to work in. Wetland soils have low weight-bearing capacity and therefore are weaker than upland soils. In addition, it is common for water to be moving through the soil near the surface.

BMPs in wetlands help minimize two primary impacts: sedimentation and the alteration of water flow through the wetland soils. Sedimentation is primarily a concern for non-forested wetlands. Sedimentation in forested wetlands is somewhat less of an issue when there are no other waterbodies flowing through them. Several wetland BMPs provide ways to increase the strength, or bearing capacity, of the soil (minimizing rutting) and to maintain water movement through the wetland soil.

PLAN AHEAD

BMPs

1. **Construct permanent wetland crossings only if there is no reasonable alternative.** Can the wetland crossing be avoided by rerouting the road or trail?
2. **Get assistance from a professional engineer or licensed forester if you need to construct permanent roads in non-forested wetlands.** These professionals can minimize your costs as well as the impacts on water quality.
3. **Avoid building winter crossings in areas with moving water that does not freeze well.**
4. **Design wetland crossings that will remain stable and will not restrict water flow during wet periods, especially at spring high water.**
5. **Determine the maintenance and closeout needs, and who will be responsible for these tasks.**

BUILD IT RIGHT

BMPs

1. **Minimize the length and width of the road or trail within the wetland.**

2. **Temporary crossings are preferred.** Use wooden mats, log corduroy, or similar structures to cross wetlands.

3. **Stabilize the approaches to non-forested wetland crossings, and the road and trail surfaces within the wetland itself.** The approaches should be stabilized out to the edge of the filter area. Filter areas around non-forested wetlands begin at the border between non-forested and forested areas (to the degree that it can be identified). See page 25 for more information on soil stabilization.

4. **Filter areas within forested wetlands need to be stabilized too.** In these cases, the filter area is based on the location of streams that flow through the wetlands.

STOP Soil disturbance, fill, and other alterations in wetlands (both forested and non-forested) may require permits from one or more government agencies. Call the Maine Forest Service first at (800) 367-0223 (in state only), or (207) 287-2791. They can refer you to the appropriate agencies.



Wetland culverts allow for cross drainage if the road fill does not.

BUILD IT RIGHT

TEMPORARY CROSSINGS

BMPs

1. **Cross wetlands on frozen ground if possible.**
2. **Use brush, if necessary, to increase the soil's bearing capacity.**
3. **Avoid rutting as much as possible.**



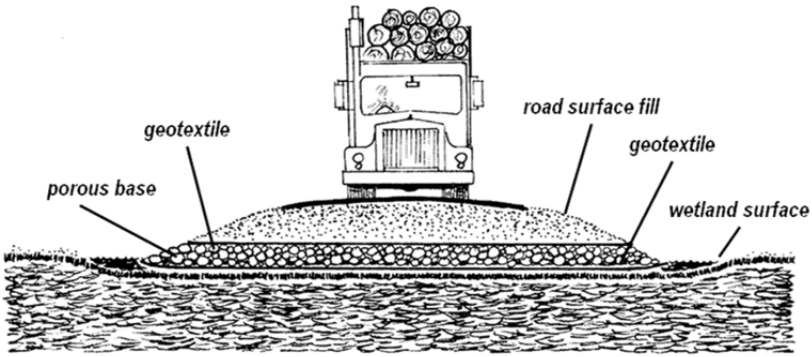
Log corduroy used for a skid trail across a wet area.

BUILD IT RIGHT

PERMANENT CROSSINGS

BMPs

1 **Use road base materials such as waste wood, poles, corduroy, or large stone that permit water to flow through the road's sub-base.** If necessary, use these materials in combination with geotextiles to keep the different layers of road material separate or to isolate the wet soils. This will increase the bearing capacity of the road so it can stand up to heavier loads and traffic.





Use geotextile to keep fill from mixing with the wetland soil

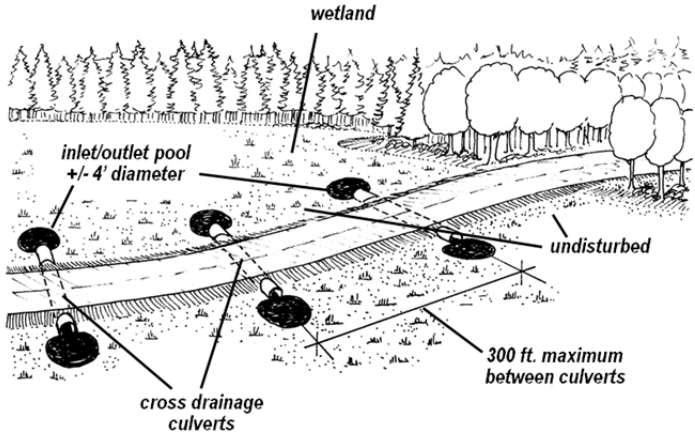
BMPs

2 **Limit excavation and other disturbances to the organic mat and the soil. If you can maintain the natural water flow without ditching, do so.**

BUILD IT RIGHT

BMPs

3. **If the drainage through the road base is not adequate (if the road is damming water), install cross-draining culverts or other structures to allow water to flow through.**



BMPs

4. **Use side ditches, parallel to the road, only when they are needed to collect flowing surface and subsurface water. Disperse the water to undisturbed areas.**

MAINTAIN IT

BMPs

1. **Use temporary crossings when the ground is frozen. Pack or plow the snow to help freeze the ground.**

2. **Keep cross drainage structures functioning by clearing debris that can plug them.**

3. **Whenever possible, use equipment with wide tires, tracks, or other features that distribute the weight.**

CLOSE IT OUT CORRECTLY

BMPs

1. **Identify the long-term monitoring and maintenance needs appropriate to the harvest site and communicate these to the landowner, forester, and logger.**

2. **After harvesting, remove wooden mats, log corduroy, or similar temporary structures used to cross non-forested wetlands.**



HIGHEST PRIORITIES

- **Construct new roads outside of filter areas, except at stream and wetland crossings.**
- **Where you must cross filter areas or wetlands, minimize the length of road.**
- **Keep water off the road with drainage systems that are well designed and maintained.**
- **Divert and disperse runoff onto undisturbed forest floor outside filter areas.**

TRUCK ROADS

This section contains BMPs for roads used primarily for hauling wood from the landing by truck. The design, materials, specifications, and use of these roads vary widely, but they are all referred to as "truck roads" in this section, whether it is a short 100-foot spur, or an extensive road system.

BMPs for truck roads are critical for protecting water quality in and around filter areas, and for minimizing runoff.

The construction and use of truck roads can sometimes cause significant water quality problems. Road construction may alter the flow of water over and through the ground. Truck roads expose soil over a large area and get heavy use. They often require permanent stream crossings. All of these factors pose risks to the quality of nearby waterbodies. However, most negative impacts on water quality can be avoided if truck roads are designed, constructed, and maintained properly.

Well-planned and well-built roads make sense both economically, and environmentally. Road BMPs:

- extend the seasons the road can be used;
- reduce road wear and maintenance costs;
- enable trucks to haul heavier loads;
- lower truck maintenance costs;
- reduce travel time; and
- protect water quality during and after harvests.



PLAN AHEAD

ALL TRUCK ROADS

BMPs

1. **Determine the size and type of road needed.** Plan roads that are appropriate to the immediate harvest needs and the long-term forest management objectives. Consider the harvest characteristics (the volume and types of products, terrain and soils), all current uses of the road, and other features of the property (the shape of the lot, proximity to neighboring lots, and long-term management plans).

2. **Identify the future forest management uses of the road, after the current operation is closed out.** Is the road likely to be used for precommercial operations like pruning? Is access for fire suppression important? How often will the road be used for harvesting?

3. **Determine the maintenance and closeout needs, and who will be responsible for these tasks.**

4. **Know the legal requirements for roads.** Are local or state permits required?

NEW ROADS

BMPs

1. **Plan and design new roads that will meet your harvest needs.**
   - What size truck will be used?
   - During what season will you be cutting, and how long will the harvest last?
   - What are the safety considerations?
   - What are the long-term road uses:
     - permanent or temporary access?
     - recreation or other road uses?
     - future harvests?

2. **Think about how you want the road to fit into the access system for the entire property. Elements to consider are:**
   - the direction of travel;
   - turnarounds;
   - entrances;
   - total road length; and
   - connections to other roads.

PLAN AHEAD

OLD ROADS

BMPs

1. **Determine if old roads can be reused or upgraded with minimal impacts to water quality.** Consider the road's location, the existing drainage (i.e., where does the water flow?), the potential for additional drainage, and intended uses.

2. **Consider relocating roads that:**
   - encroach on a filter area unnecessarily;
   - have poorly placed or unnecessary stream crossings;
   - have poor drainage; and/or
   - have unstable soils that cannot be improved (especially gullied roads, roads in ravines, or roads that collect and hold water).



In some situations, there may be laws that govern when, where, and how old roads can be upgraded. Contact the Maine Forest Service, the Maine Department of Environmental Protection, the Land Use Planning Commission, and/or the town Code Enforcement Officer for more information.

PLAN AHEAD

LOCATING AND LAYING OUT NEW ROADS

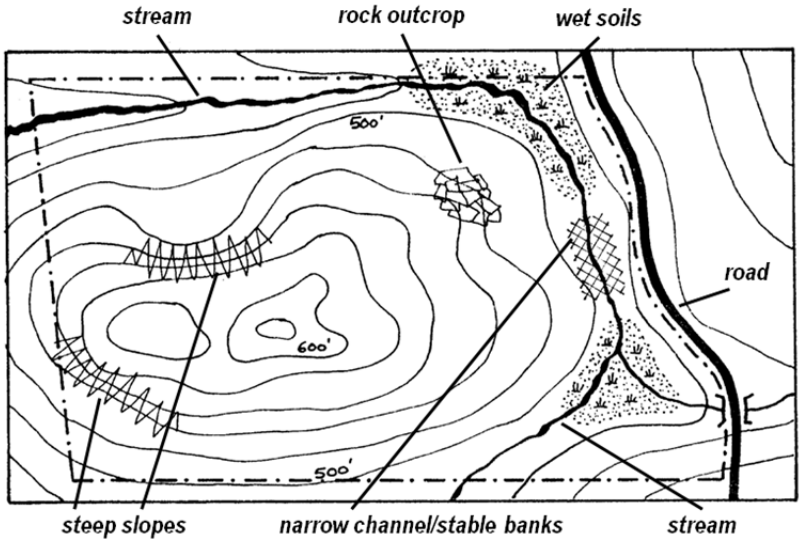
Lay out new roads so that they fit the terrain, ground conditions, and equipment you will be using. It is often helpful to use topographic maps and aerial photos for this.

These recommendations are not intended to substitute for obtaining engineering advice or abiding by regulations in the appropriate circumstances.

BMPs

1 **Identify important features on maps, aerial photos, and in the field.** Be sure to include:

- the boundaries of the property and the area to be harvested;
- water bodies and filter areas;
- ephemeral, wet, or poorly drained areas next to water bodies;
- existing roads, entrances, landings;
- stands; and
- terrain features such as steep slopes, flat benches, rock outcrops, gullies, bowls, and ridges.



Map out important features on the ground first...

PLAN AHEAD

BMPs

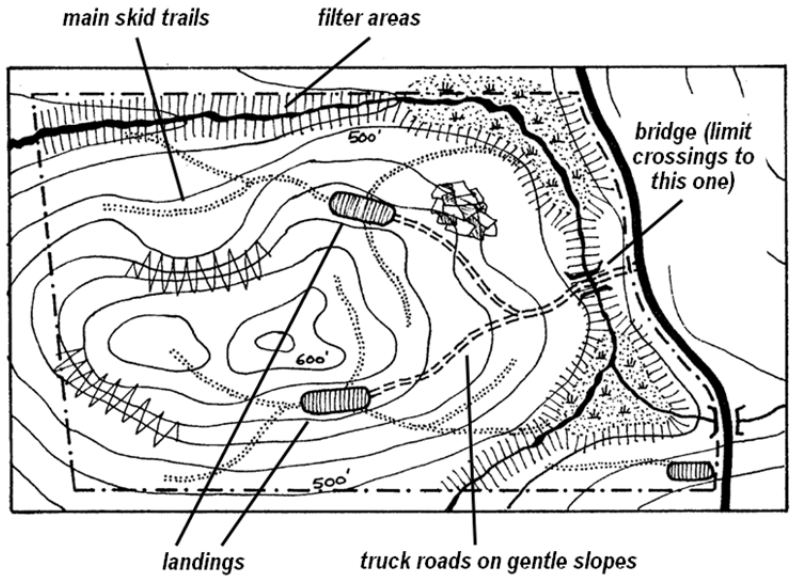
2. **Mark the harvest boundaries, water bodies, new road locations, stream crossings, and filter areas on-site.**

3. **Lay out roads where there are better-drained soils, gentle slopes (ideally 2–5%), and good stream crossing locations.**

4. **Minimize the overall road length, while still meeting operational objectives, including preferred log landing locations.**

5. **Minimize road sections where water may be difficult to drain or divert.** Pay special attention to:
   - road grades greater than 10% (over 15% in mountainous terrain);
   - long, unbroken grades;
   - long, flat stretches; and
   - roads laid out straight uphill or downhill that still require ditches.

6. **Avoid filter areas (except at appropriate stream crossing locations); ephemeral, wet, or poorly drained areas; floodplains; and steep slopes, outcrops, gullies, or ravines.**



...then lay out the roads, trails, etc.

BUILD IT RIGHT

BMPs protect water quality when building new roads or upgrading old ones. Using BMPs protects the condition of, and investment in, the road.

TIMING

BMPs

1. **Whenever possible, construct roads during dry periods or when the ground is frozen.**
2. **Minimize work during heavy rains and/or wet periods.**
3. **Plan how and when roads built during the winter will be stabilized.**
4. **If possible, build roads before you intend to use them heavily so that they have time to settle and stabilize.**



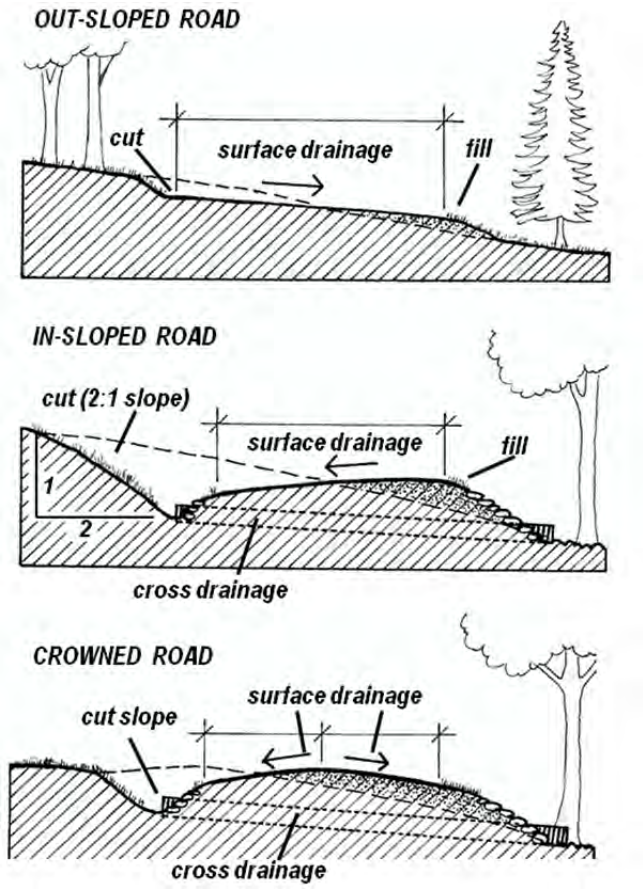


CONSTRUCTION

BMPs

1. **Shape roads to move water off the road surface using a crown, an out-slope** (this may present a safety hazard in icy conditions or on curves), **or an in-slope** (this will often require ditches and cross-drainage structures).
2. **Use gravel, crushed stone, or other surface material** (with or without geotextile) **to stabilize roads, shed water, and increase the weight-bearing capacity.**
3. **Maintain cut and fill slopes at a natural angle of repose or less** (2:1 for average soils) **wherever possible.**

BUILD IT RIGHT



BMPs

4. **As the construction progresses, stabilize areas of exposed soil that will receive road runoff such as cut-and-fill slopes, steep road shoulders, and erosion-prone soils in filter areas.**

5. **Use temporary sediment barriers to slow flowing water and trap sediment during construction.**



KEY ISSUE

Controlling the Water

DRAINAGE AND DIVERSION STRUCTURES

Water diversions minimize the amount of run-off that reaches waterbodies. These diversions can include cross-drainage structures, ditches, turnouts, and other structures that divert water away from the road and disperse it into areas of undisturbed forest floor.

BMPs

1 **Construct roadside ditches to carry runoff from the road surface and uphill areas. Ditches with a flattened U-shape (a broad, rounded bottom and sloping sides) are preferred—avoid straight-sided ditches.**



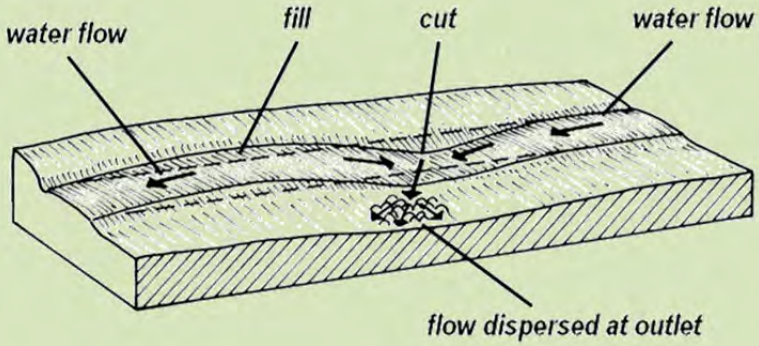
Grass and stone stabilized ditch



U-shaped, grass stabilized ditch

BMPs

2 **Divert water off the road surface and away from the road using natural dips (or grade breaks), broad-based dips, culverts, turnouts, or similar techniques.**



BMPs

3 **Space water diversions close enough together to control the volume and speed of water.** The recommended spacing varies widely, depending on the grade (steeper grades require closer spacing). Refer to Table D for the spacing most appropriate for the slope at hand. Choosing appropriate locations for the diversions may be more important than spacing on some sites.

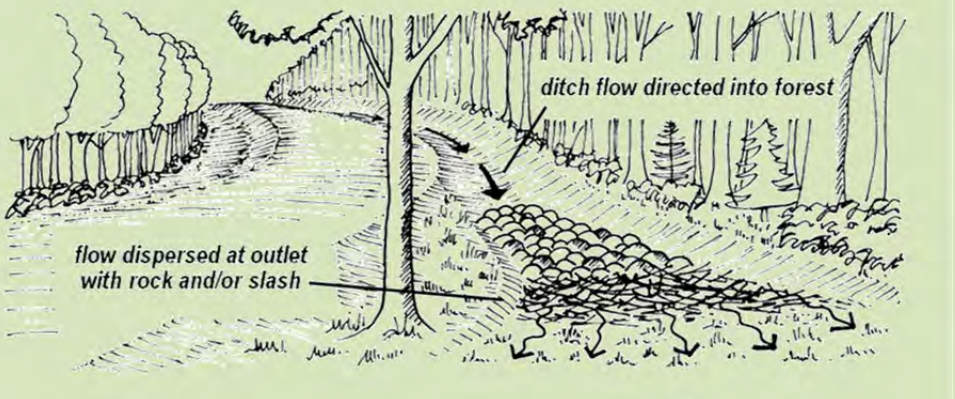
Table D
Spacing for Water Diversion

Road Grade (%)	Spacing (ft.)
0-2	250-500
3-5	165-250
6-10	140-165
11-15	125-140
16-20	100-125
21+	<100

4 **The location and spacing of culverts is often more important than their diameter. For round culverts, use at least a 15- to 18-inch diameter size to minimize plugging and maintenance.**

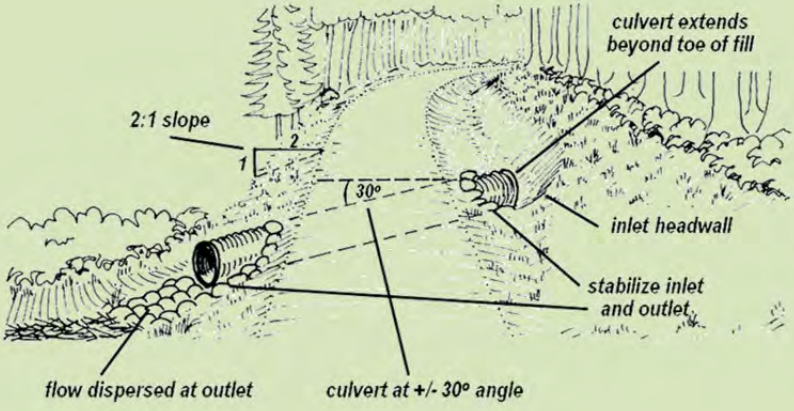
5 **Disperse water flowing from the outlets of diversion structures or from downhill road shoulders using brush berms, riprap aprons, or other methods—before it enters the filter area.**

6 **Construct settling basins outside the filter area if water from ditches cannot be diverted off the road onto undisturbed forest floor.** Settling basins will require periodic maintenance and cleaning.



CROSS-DRAINAGE CULVERTS

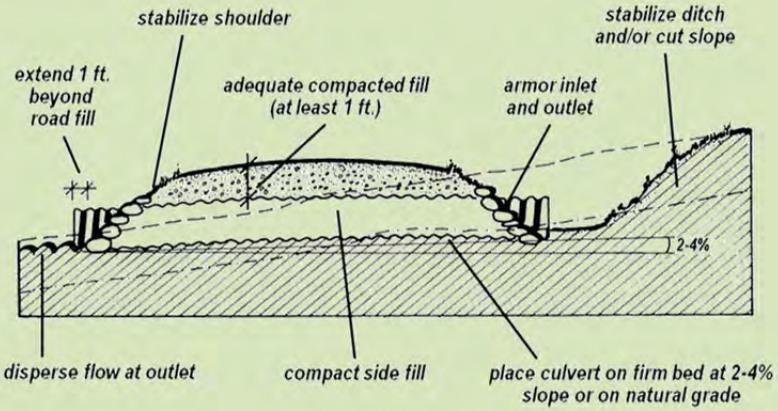
Cross-drainage culverts may be metal, plastic, concrete, or wood (box culverts). Permanent or temporary culverts are most effective when installed according to the following specifications.



BMPs

1 **Install a berm or diversion headwall that directs ditch water into the culvert and protects the culvert end.** Ideally, the berm is left in place during the excavation of the ditch.





BMPs

2. **Install culverts at a 2–4% slope and at a 30° angle to** the road.

3. **Stabilize areas around the inlet and outlet with riprap or other material, and extend the culvert at least 1 foot from the road fill on either end.**



4. **Install culverts on top of adequate bedding material (native soil or, if necessary, added fill) that is free of branches or large rocks.**

5. **Cover the culvert with compacted material to a depth of half the culvert diameter (or a minimum of 1 foot) or to the manufacturer's recommended specifications.**

MAINTAIN IT





Proper road maintenance protects water quality and the road by keeping the BMPs functioning. If these structures fail, significant water pollution can result, most often during severe rainfall or snowmelt. Many of the structures used to divert water from road and trail surfaces should be maintained both during and after the harvest (unless the road is closed out). Periodically removing accumulated sediment in these structures will keep them operating as they were designed to.

BMPs

1. **Avoid using roads during wet seasons or after heavy rains.** Let wet roads dry out or freeze before reusing them.
2. **Regrade the road surface if the crown is lost from heavy use.** This prevents water from running in the wheel ruts. Don't leave material at the road's edge. Such "false ditches" can carry water along the road edge, bypass the BMPs, and channel the water into filter areas or crossings.
3. **Inspect ditches to make sure they have not begun to fill in, slump, or develop channels. Clear blocked ditches.**
4. **Reshape and/or stabilize ditches as needed with erosion control mats, or by other methods.**
5. **Stabilize exposed soils within filter areas and areas that drain directly to waterbodies. Where your original stabilization techniques are no longer effective, restabilize using additional materials (mulch, brush, and/or seeding) or other techniques.**
6. **Keep cross-drainage culverts free of debris and accumulated sediment at their inlet and outlet. Repair the outfall protection if water is eroding the soil around it.**
7. **Maintain the riprap or other armoring at culvert ends to prevent erosion around the pipe and to protect the ends from physical damage.**
8. **Replace culverts that have been undermined or crushed, before they fail.**
9. **Clean out settling basins, ponds, and check dams well before they fill up with sediment.**

CLOSE IT OUT CORRECTLY

Most erosion and sedimentation from roads happens within two years of the operation. Road closeout BMPs are best used before leaving the site for any extended period, or after the harvest is completed—even if you expect to use the road again. These BMPs prevent damage, ensuring that the road can be used again in the future. Of course, they also prevent water pollution.

BMPs

1. **As a first step, identify the long-term monitoring and maintenance needs appropriate to the harvest site, communicate these to the landowner, forester, and logger, and decide who will be responsible for each task.**

STOP If you are planning to close access roads permanently, notify the Maine Forest Service at (800) 367-0223 (instate) or (207) 287-2791.

2. **Close out road sections as portions of the harvest are completed.**
3. **Make sure drainage structures are functioning correctly, are free of debris and accumulated sediment at their inlet and outlet, and are adequately sized for storm events.**
4. **Stabilize and seed exposed soils outside the travel surface, within filter areas, and in areas that drain to waterbodies.**
5. **Reshape and stabilize the road surface and ditches as needed.**
6. **Remove temporary sediment barriers such as hay bales and filter fences.**
7. **Divert water entering the road from skid trails, log landings, or other roads.**
8. **If necessary, limit or block vehicle access to prevent damage or rutting** (if this is compatible with the landowner's objectives)**.**



Revegetated road ditches carry water without eroding.



HIGHEST PRIORITIES

- **Locate landings on sites with well-drained soils and gentle slopes whenever possible.**
- **Avoid locating landings in or near waterbodies (including wetlands) and filter areas.**
- **Minimize the amount of water entering the landing from roads or skid trails.**
- **Stabilize and maintain the landing surface.**

LOG LANDINGS

Log landings are the cleared areas in the harvest area where logs and other products are brought from the woods and piled, sorted, or stored before being loaded onto trucks. Log landings are sometimes referred to as log yards or decks. Landings are also where hazardous materials often are stored or used to maintain and repair equipment and roads. Please refer to the "Hazardous Materials" section on page 90 for BMPs that deal with these substances.

BMPs will help prevent negative impacts to water quality and can extend the use of log landings during—and long after—the harvest. Landings are often the most visible part of the operation. BMPs may help maintain or improve the landing's appearance while demonstrating conscientious work to the public.

PLAN AHEAD

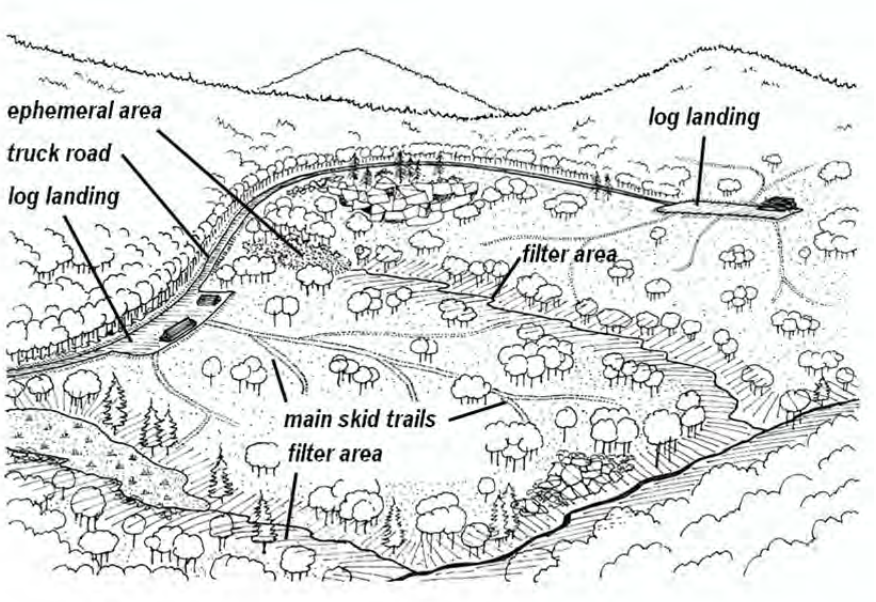
Log landings are busy places where a relatively large amount of soil may be exposed or disturbed. It is therefore important to locate landings away from water and maintain erosion controls.



PLAN AHEAD

BMPs

1. **Use maps and field information to decide the best location for log landings.** Preferred sites are:
   - on well-drained soils;
   - on gently sloping (not flat) ground; and
   - outside filter areas.
2. **Keep the landing as small as possible and still meet the requirements of the equipment, the quantity and type of products, and safety.**
3. **Mark the landing boundaries before construction begins.**
4. **Lay out skid trails and roads so that water cannot flow into or out of the landing where they enter.**
5. **Plan how you will stabilize exposed soil on the landing after the job.**
6. **If landings already exist, determine if they can be reused with adequate erosion controls. If not, relocate them.**



Select landing locations carefully.

BUILD IT RIGHT

BMPs

1. **Minimize the area of the landing that is stumped or grubbed.** Logs may sometimes be piled on relatively undisturbed soil or forest floor, within reach of loading equipment.

2. **Install drainage ditches, water bars, or berms to drain the landing to areas of undisturbed forest floor, or to road drainage systems that can handle the amount of water coming off the landing.**

3. **Surface the landing with wood chips, stone, or aggregate if it will help stabilize the surface and shed water.** Use these materials on top of geotextiles, if necessary.

4. **During construction, install temporary sediment barriers (such as hay bales or silt fences) to keep newly exposed soil from entering flowing water and filter areas.** See page 30 for more information on temporary sediment barriers.



Slash and logging debris can help stabilize exposed soil on log landings.

MAINTAIN IT

BMPs

1. **Maintain the landing surface to keep water from collecting or channeling.**
2. **Maintain drainage structures on roads and trails to keep water from entering the landing.**
3. **Install temporary or short-term measures (e.g., water bars) on skid trails if significant rain is likely during operations.**
4. **Allow landings to dry out after significant rainfall.**



A well-maintained, well-drained landing.

CLOSE IT OUT CORRECTLY

BMPs

1. **As a first step, identify the long-term monitoring and maintenance needs, decide who is responsible for these tasks, and make sure everyone involved in the operation is notified.**

2. **Prevent water from entering or exiting the landing via roads or skid trails.** If necessary, install water bars or similar diversions to divert flowing water to the undisturbed forest floor.

3. **Seed, mulch, or otherwise stabilize the landing to establish a vegetative cover.** This is particularly important near waterbodies and filter areas. If the soils in the landing are severely compacted, some site preparation may be necessary before vegetation can take root.

4. **Limit vehicle access to the landing** (if this is compatible with the landowner's objectives)**.**

5. **Remove any temporary erosion control structures such as staked hay bales or silt fences. Make sure that permanent measures are in place.**



Seeded and mulched landing area.



HIGHEST PRIORITIES

- **Minimize water channeling in trails and entering filter areas.**
- **Limit the amount of exposed soil.**
- **Leave enough vegetation to provide important natural functions within filter areas.**
- **Close out trails appropriately.**

TRAILS AND HARVESTING

Much of the activity on a harvest operation happens on logging trails, away from truck roads and log landings. Trails may be cut for skidders, forwarders, felling machinery, and other equipment. Logging trails often require little or no excavation, and are usually temporary.

PLAN AHEAD

WORKING IN FILTER AREAS

Clearing trails and cutting trees, by themselves, may have a limited or temporary impact on water quality. However, when trails and trees are cut within a filter area, the potential for negative impacts on water quality increases.

BMPs

1. **Determine how much and where to cut within the filter area first; then plan your trail layout.** Limiting the harvest activity within the filter area is an important practice for protecting water quality during harvesting.

2. **Delineate filter areas in the field that are of appropriate width around waterbodies** (including non-forested wetlands)**.** The size of the filter area should be based on site and stand conditions, but at least the width shown in Table A on page 23.



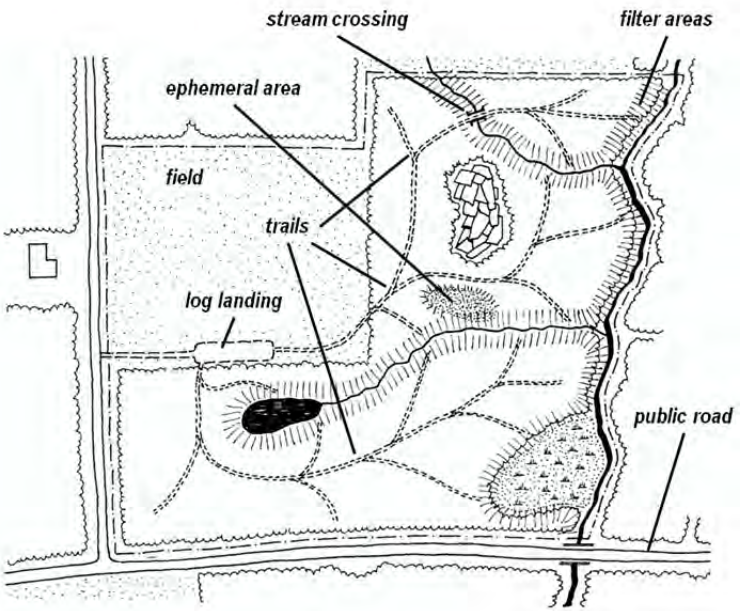
PLAN AHEAD

TRAIL LAYOUT

Locating and laying out skidding or forwarding trails in advance, especially main trails, can prevent problems. Consider the terrain, where the wood is, the lean of the timber, available equipment, the grade, soil conditions, skidding distance, filter areas along streams, and stream crossings. Good planning may reduce the skidding costs, and can reduce or eliminate the need for additional BMPs and structures.

BMPs

1. **If possible, lay out trails for winter harvests in advance when there is no snow on the ground. Ideally, lay out trails on bare ground during wet seasons.**
2. **Whenever possible, lay out main trails to avoid waterbodies and their associated filter areas, wet spots, seeps, and the bases of slopes.**
3. **Keep trails out of stream channels and off the banks of waterbodies.**
4. **Construct trails on the contour, if it is safe to do so.** Avoid skidding straight up and down hills. Remember that trail systems that run downhill to the landing tend to concentrate runoff.



Example of small lot layout.

PLAN AHEAD

BMPs

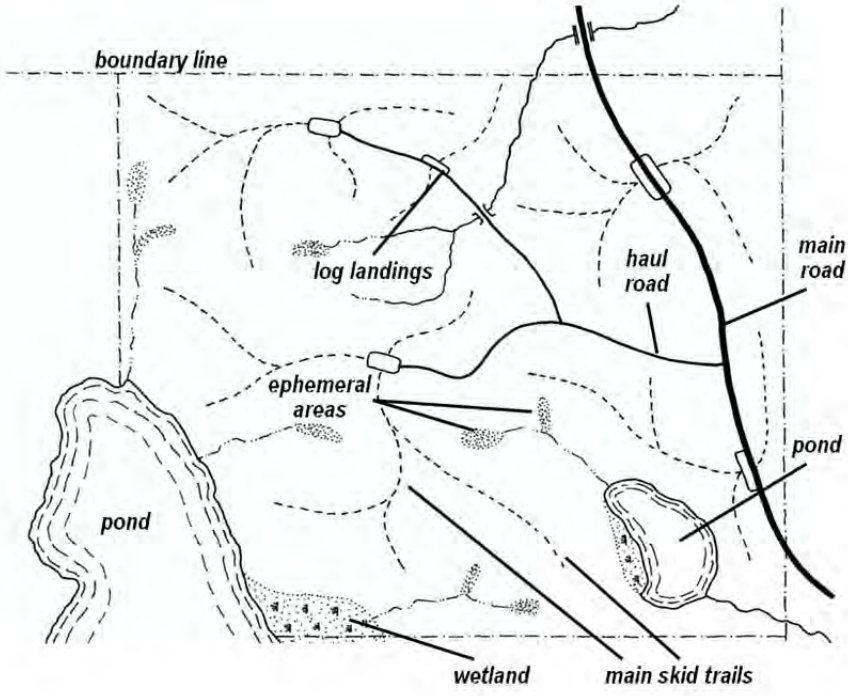
5. **Plan to divert water from the trails to the undisturbed forest floor.**

6. **Minimize trail sections on steep slopes (>15%) wherever possible.**

7. **Plan to harvest during appropriate soil and weather conditions** (preferably on dry or frozen ground)**.**

8. **Before you use old trails in the harvest area, consider whether water will run in them and where this water goes.** Use existing trails only if runoff can be kept out of waterbodies by:

   - diverting water from the trail (for example, by using water bars); and
   - using brush or other materials to prevent ruts from developing or deepening.
   - If old trails are deeply rutted and the site cannot be harvested without additional rutting, consider harvesting on frozen ground and/or relocating the skid trails.



Example of large lot layout.

BUILD IT RIGHT

BMPs

1. **Construct trails using simple structures that divert water.** Keeping water out of the trail not only prevents erosion, but also reduces equipment wear and extends the period that the trail is usable (both during and after wet weather).

2. **If possible, limit the use of equipment in filter areas, or harvest only on frozen ground.**

3. **Limit the amount of disturbed soil in filter areas and make sure that any sediment is filtered out before it reaches surface water.** This reduces the impact of skidding and forwarding.

4. **Use brush to reduce the amount of ground compaction the equipment causes, to prevent soil disturbance, and to stabilize areas of exposed soil in filter areas.**



Brush on skid trails, as well as frozen ground, helps minimize soil disturbance and rutting.

KEY ISSUE

Water Diversions for Trails

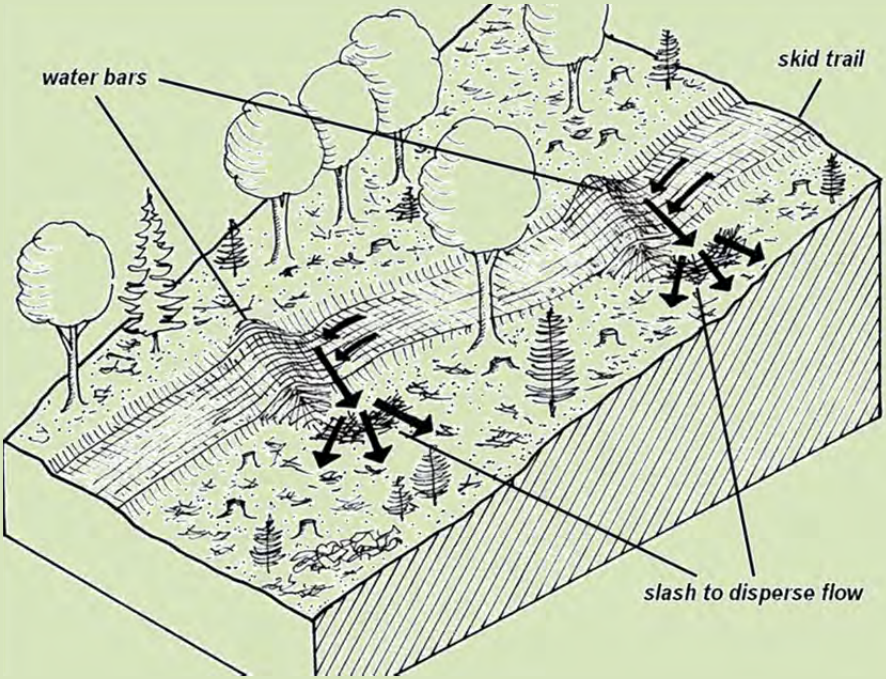
BMPs

1. **Install water bars, skid humps, or other diversions to move water off the trail, preferably before it reaches the filter area.**

2. **Locate water bars and other diversions frequently enough to prevent water from accumulating, based on Table E.** On some sites, choosing appropriate locations for diversions may be more important than their spacing.

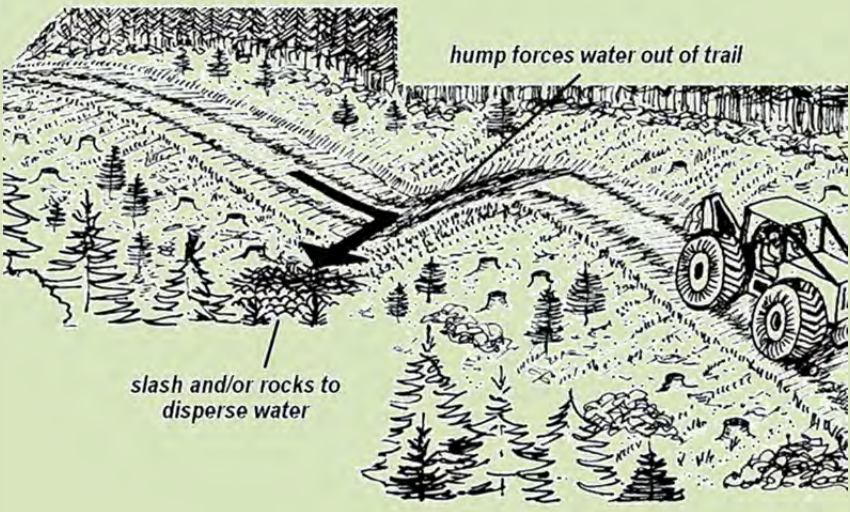
Table E
Water Bar Spacing Guidelines

Slope (%)	Spacing (ft.)
1-2	250-400
3-5	135-250
6-10	80-135
11-15	60-80
16-20	45-60
21+	<45



BMPs

3. **Make water bars at least 6-12 inches deep, 6-12 inches high, and install them at a 30-degree angle to the trail.**
4. **Extend the water bar inlet and outlet 1 foot or more beyond the trail to keep the diverted water from re-entering the trail.**
5. **Use the terrain to incorporate natural skid humps into the trail layout, to help divert water from the trail.**
6. **Put brush in the trail, as needed, to help disperse water.**



Skid hump.

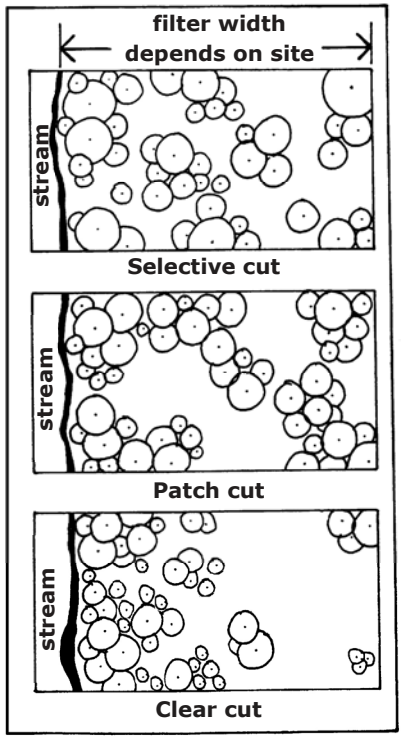
HARVEST IT RIGHT

Trees and other vegetation are important components of filter areas. One of the most important BMPs for trails is to keep enough trees and other vegetation within the filter area to provide adequate shade, stabilize the banks, limit impacts to soils, and supply organic material to the water.

STOP **Harvest restrictions and required practices may apply in some jurisdictions. Call the Maine Forest Service at (800) 367-0223 in-state or (207) 287-2791 for assistance.**

BMPs

1. **Modify the filter area width as needed to achieve the goals mentioned above.**
2. **Maintain a diverse species composition.**
3. **Retain a range of both larger- and smaller-diameter trees.**
4. **Leave an adequate canopy of trees and shrubs to shade the water surface and provide leaf litter.**
5. **Limit harvesting that removes most of the forest structure** (like clearcuts or overstory removal) **in filter areas.** Some small patch openings may be appropriate if they maintain or enhance the forest structure.
6. **In general, harvest less and less intensively as you get nearer to the waterbody, although harvest intensity will vary with local stand conditions.**
7. **Use directional felling to drop trees away from waterbodies.** Avoid dropping slash or logs into stream channels and other waterbodies.
8. **Remove slash that has fallen into waterbodies with a boom, winch, or by hand.** Leave any tops or stems that have fallen into the water naturally.



No matter the type of cut, always retain more trees near waterbodies

MAINTAIN IT

BMPs

1. **Use brush on main trails and in filter areas to prevent ruts from developing. If ruts develop anyway, stabilize them using more brush and consider relocating to firmer ground, or waiting for drier or frozen conditions.**

2. **Inspect and maintain water bars periodically to prevent water channels from developing in the trails.**

3. **Stay alert to weather forecasts of significant rain or substantial thawing.** Consider:

   - limiting equipment use, working in a different area, or doing other work until the site dries up or refreezes;
   - applying brush to soft areas to distribute the equipment's weight before problems develop; and
   - installing additional temporary diversions, especially water bars, to prevent water from running in the trail.



Water bars move water out of the trail onto the forest floor.

CLOSE IT OUT CORRECTLY

Proper closeout ensures that future problems do not develop.

BMPs

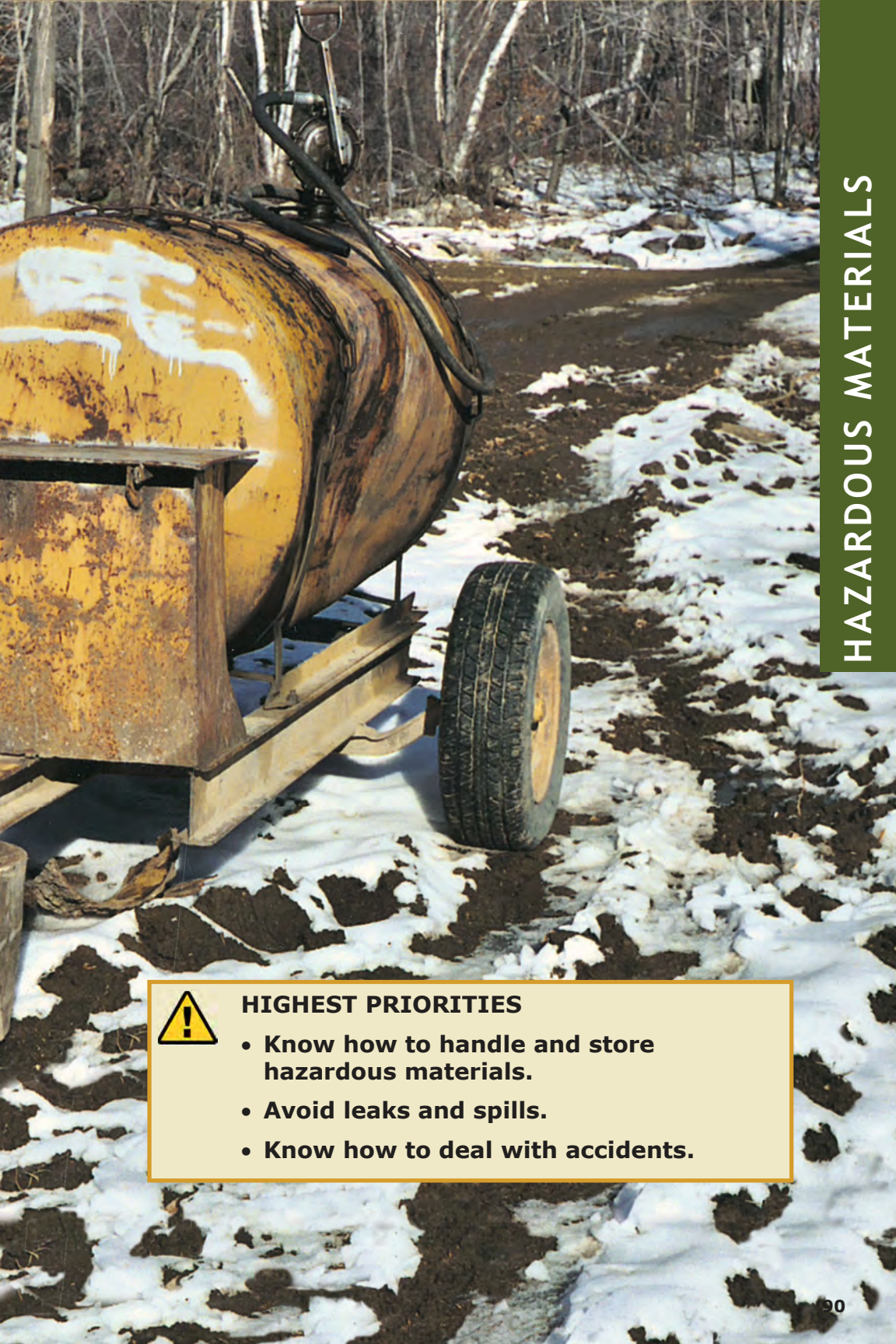
1. **Identify the long-term monitoring and maintenance needs appropriate to the harvest site and decide who is responsible for them.** Communicate this to the landowner, forester, and logger.



A trail closed-out with water bar and seeding.

BMPs

2. **Close out unused trails as the job progresses.**
3. **Install diversions such as water bars on trails before leaving a site permanently or suspending operations for more than a few weeks. Diversions should be installed wherever water channels could develop that will carry runoff to waterbodies or their filter areas.**
4. **Smooth rutted trails, if necessary, to keep channels from forming, and to divert runoff directly into filter areas.**



HIGHEST PRIORITIES

- **Know how to handle and store hazardous materials.**
- **Avoid leaks and spills.**
- **Know how to deal with accidents.**

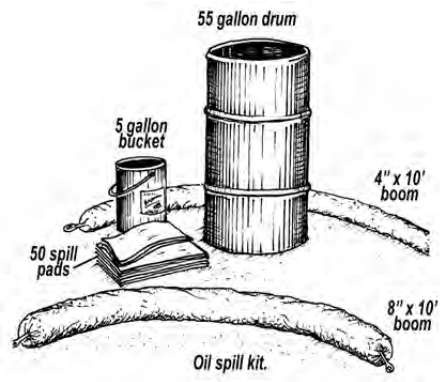
HAZARDOUS MATERIALS

FUELS, OIL AND COOLANTS

Oils, fuels, hydraulic fluids, coolants, etc. are hazardous materials commonly used at log landings. It is important to know how to handle these materials, how to avoid spills while maintaining or repairing equipment, and how to respond to accidents.

BMPs

1. **Use appropriate containers for collecting and storing oils, fuels, coolants, or hazardous wastes.** Store these materials in designated areas and remove them from the site when they are no longer needed.



2. **Maintain and repair all equipment outside of filter areas.** Inspect hoses, fuel trucks, and tanks for leaks, and make repairs immediately.
3. **Have spill kits or other absorbent materials for mopping up spills readily available.** Hay or sawdust may be adequate for very small spills. Waste containment kits are available commercially and should be on hand for larger spills.
4. **If a spill occurs, keep it from flowing off the yard and into surface waters.**
5. **Know what state agency phone numbers to call in case of an emergency.**
6. **Collect trash and dispose of it properly.**

STOP

For assistance with spills of hazardous materials, call the Department of Environmental Protection's Division of Response Services office nearest you:

Augusta	**(207) 287-7688**
Bangor	**(207) 941-4570**
Presque Isle	**(207) 764-0477**
Portland	**(207) 822-6300**

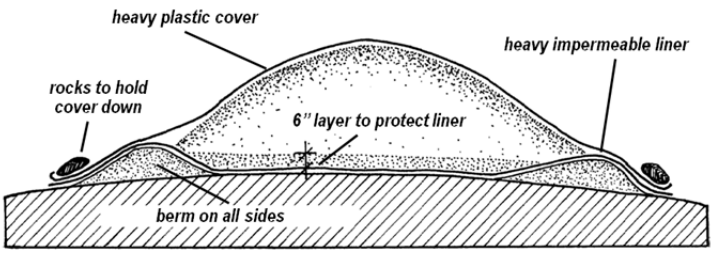
In an emergency, call
(800) 482-0777 (oils/fuels)
(800) 452-4664 (other chemicals)

TEMPORARY SAND AND SALT STORAGE

Sand and salt are often necessary to maintain safe winter conditions on truck roads. The following BMPs will help minimize or eliminate the possibility that these materials will discharge from storage areas to waterbodies or into the groundwater.

BMPs

1. **Locate sand and salt storage areas away from waterbodies, wetlands, ephemeral flow areas, or other wet areas.** At a minimum, storage areas should be outside filter areas.
2. **Locate storage areas on high flat ground, near the road, and away from water diversions that direct water into road ditches.**
3. **Enclose the storage area with a berm high enough to contain rain and snow that may collect in the storage area.** Put a heavy impermeable liner, such as heavy plastic, on the ground where the sand and salt will be stored. Run the liner up the sides of the berm. The goal is to minimize the amount of moisture reaching the groundwater.
4. **Leave at least a 6-inch layer of mixed sand and salt over the liner at all times to avoid puncturing it when digging in the pile.**
5. **Cover the sand and salt mixture with heavy plastic when it is not being used.**
6. **When abandoning the site, remove the remaining sand and salt mixture and the liner, and properly dispose of them off-site.**
7. **Return the site to its original condition.** If necessary, seed or plant with a vegetative cover.



Temporary salt and sand storage pile.

PESTICIDE USE



Pesticides include chemical agents such as herbicides, insecticides, fungicides, rodenticides, or other chemicals used to control plants or animals that are interfering with forest growth. All herbicides and pesticides are regulated by state law through the Board of Pesticide Control (Maine Department of Agriculture, Conservation and Forestry).

Commercial herbicide and pesticide applicators must be licensed and certified by the Board. Landowners or managers who wish to apply herbicides and pesticides themselves on their own land should contact the Board before proceeding.

BMPs

1. **Maintain the required buffers between spray operations and waterbodies.**
2. **Apply pesticides and herbicides during favorable weather conditions.**
3. **Abide by all pesticide label requirements, including use rates, handling, storage, and disposal.**
4. **All herbicide and pesticide handling—mixing, loading, equipment cleaning, and storage—should be done away from waterbodies, outside filter areas, and away from road drainage systems.**
5. **Remove stored chemicals from the site when they are no longer needed.**
6. **Have spill kits or other absorbent materials on hand for** mopping up spills.

STOP

Refer to the Maine Board of Pesticides Control for rules and licensing requirements regarding the use of pesticides.

Phone (207) 287-2731
Website www.maine.gov/dacf/php/pesticides

FOR MORE INFORMATION

TECHNICAL ASSISTANCE

Maine Forest Service

Maine Department of Agriculture, Conservation & Forestry
22 State House Station
Augusta, ME 04333
(800) 367-0223 (in-state only), or (207) 287-2791
www.maineforestservice.org

Maine Department of Environmental Protection

17 State House Station
Augusta, ME 04333
General number: (800) 452-1942 (in-state only) or (207) 287-7688
Bureau of Land and Water Quality: (207) 287-2111

Maine Department of Inland Fisheries and Wildlife

41 State House Station
Augusta, ME 04333
(207) 287-8000

USDA Natural Resources Conservation Service

967 Illinois Avenue, Suite #3
Bangor, ME 04401
(207) 990-9100 x 3

MAINE FOREST SERVICE PUBLICATIONS

Other Maine Forest Service publications can be found at maineforestservice.gov under “Publications” including:

- The Forest Rules of Maine
- Stumpage Price Reports
- The Forest Trees of Maine
- Forest Health and Monitoring Information Sheets
- Forest Policy and Management Information Sheets

You may also scan this QR code using an app on your smart device for immediate access to our website.

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2017
Maine Department of Agriculture, Conservation & Forestry
Maine Forest Service
22 State House Station
1 (800) 367-0223 (in-state)
(207) 287-2791

www.maineforestservie.org

maine DEPARTMENT OF Agriculture Conservation & Forestry

Be Woods Wise!
www.bewoodswise.org
from the Maine Forest Service.

Appendix H: Forest Inventory Procedure & Design

Strata Design

To quantify the amount of mature forest on the Protected Property in 2025, the forest inventory procedure and design description below were used by Weyerhaeuser to estimate the mature forest area.

The inventory was derived through a two stage strata level estimate where existing 2016 LIDAR flights were used to derive strata assignment to each stand within the Protected Property along with stand history and NAIP imagery.

LIDAR statistics ranging from average, median, standard deviation, and 10 ft height class tabulated stand statistics were used to determine the size density matrix (stand class) for the strata. ESRIs Spatial Analyst Tool Zonal Toolbox's Tabulate Area and Zonal Statistics as Table was used to assign these statistics at the stand level to the productive portion of the stand.

Stand history, LIDAR intensity returns, and NAIP imagery were used to determine the covertype of each stand. The FMP describes the covertypes within the Protected Property.

Each stand was assigned a covertype and a stand class. These covertype and stand classes will be grouped into 'like' types. These like types will be the strata. The strata is what is sampled.

A portion of each strata is sampled at the stand level. A stand lister is selected to install forest inventory plots. Stands are sampled to make field cruise operations more efficient. Enough stands are selected and enough plots installed to get a statistically viable sample for the Protected Property.

Once the stands are selected for sample the following sampling plot procedure is followed.

Sampling Plot Procedure

Stand Designation

Weyerhaeuser will provide to the contractor a map, a stand list, and a plot list of designated plots to be cruised. The Map, Stand, & Plot List, defines all stands and plots to be cruised. Weyerhaeuser will provide all plot locations through a shapefile or table of X/Y plot locations. All spatial data will be passed from Weyerhaeuser to Contractor in the WGS 84 or NAD 83 UTM 19N meters projection format.

Plot Placement

Plots must be taken at designated X/Y coordinates defined by the Plot Allocation Table or shape file provided in the data transfer. Plots shall be a minimum of 33 feet perpendicular from any road right-of-way or stand boundary.

Plots must fall within ½ chain (33 ft) of the submitted X/Y plot location as measured by the check cruiser. Adjust for the changing slopes between plots on the line of travel to consistently place plots at the desired grid distance.

If a plot must be offset due to nearness to stand boundary or road ROW record the offset on the plot tally and on the witness flagging. Offset distance and direction must be recorded on the witness flagging at designated X/Y in the "Allocation Table". Offset plots in full ½ chain increments into the stand being cruised perpendicular to the road or stand line encountered. Hang flagging with offset distance and bearing at road edge or stand line at designated X/Y in the Plot Allocation Table.

Variable Radius Point Offset Method – Visually estimate the largest tree (dbh) in the vicinity of the offset. If greater than 36" offset 2 chains, if greater than 24" offset 1 ½ chains, if greater than 12" offset 1 chain, and if less than 12" offset ½ a chain from the hard boundary of the road edge or stand line.

Fixed Plot Offset Method – Offset plot in full ½ chain increments to prevent plot boundary from intersecting line or ROW being offset.

Sampling Methods

Sample trees shall be selected at each plot/point using the following methods:

10BAF - Variable Radius Point - Sample trees are selected using a 10 BAF glass prism or angle gauge. Sample trees shall have a Diameter at Breast Height (dbh) equal to or larger than the defined Minimum Main Plot dbh. Sample tree's midpoint at dbh must be within the limiting distance as defined by the dbh class to the 1/10th inch class in the limiting distance chart attached. Tree dbh will be measured with a steel diameter tape at the time of auditing.

If the average tree count on the 10 BAF Radius Point exceeds 10 trees per plot a 15 or 20 BAF sample may be used in place of the 10 BAF prism. A 10, 15, or 20 BAF prism sample may be used to ensure an average of 8-10 trees in the **main** plot per stand.

Install nested regeneration plot with a 1/100th acre fixed radius plot and sample trees with a diameter at Breast Height (dbh) equal to or larger than the defined Minimum Nested Plot dbh in Exhibit D and less than the Minimum Main Plot dbh. The nested plot will utilize a defined **11.78 feet** fixed length radius. The nested plot and main plot share the same plot center.

FIXED 40 - Fixed Area Radius Plot - Plot where species and size data shall be collected on trees with dbh equal to or larger than the defined Minimum Main Plot dbh. Sample tree's midpoint at dbh must be within the defined plot radius to be sampled. This plot will utilize a defined **18.62 feet** fixed length radius.

Install nested regeneration plot with a 1/100th acre fixed radius plot and sample trees with a diameter at Breast Height (dbh) equal to or larger than the defined Minimum Nested Plot dbh in Exhibit D and less than the Minimum Main Plot dbh. The nested plot will utilize a defined **11.78 feet** fixed length radius. The nested plot and main plot share the same plot center.

Plot / Point Type – The size of the variable radius point or fixed area plot will be defined at the stand # level in the "Maps and List".

Sample Plot Procedures

The following standards apply. Refer to the Plot Record Example for the complete list of fields being collected. Refer to the Species Code Table, Plot Size / BAF, and Product Code Tables for the correct codes to use in the plot record. Refer to Exhibit A Plot Allocation table for correct standkey plot number combinations and locations.

Plot Record Example:

Contractor Name or User Name	Tract Name	Stand #	Stand Acres	Plot #	Tree #	Tree Count	Species Code	Product Code	DBH Class	Merch Ht	Total Ht	HtToLiveCrown	Cruise Date	Plot Size/BAF
ED	WalterAspen2	1995003441	1	1	1	1	ASQ	Pwd	8	0	55	30	12/19/2015	BAF10NA

Stand Information

Required information for each stand sampled includes:

1. **Stand #** – The "Allocation Table" will describe the proper identification coding.
2. **TractName** – Project Name
3. **Contractor Name or User Name** - Name of individual cruiser tallying the plot.
4. **Cruise Date** of plot field sampling (first day when sampling occurs over multiple days.)
5. **Plot Size/BAF –** Plot size and configuration
    a. **FIXED 40** – Fixed area 1/40th acre radius plot (18.62' radius)
    b. **BAF10** – Variable radius point sample 2.75 prf 10 BAF

Plot Identification

Required information for each plot sampled includes:

1. **Plot Number** – described below.

2. Offset Plots need to have offset length and direction of offset on plot data and/or flagging in woods.

Plot identification shall utilize a numerical sequence for all plots placed in a stand defined in the Plot Allocation Table. Weyerhaeuser will assign the plot numbers.

Plot centers on cruise plots shall be marked with flagging tied to a stake, a wire flag, or a flag shoved in the ground. Wire flag must be used if snow is on the ground. If flagging shoved in ground flagging extending from ground plot center must be 2.5' long at minimum and flagging must be firmly in ground. The plot center is where the stake, flag, or flagging enters the ground.

'Witness Flags' shall also be attached to a tree limb near plot center to aid in location. This witness flag shall be at least 3 feet long, as measured from the knot to the longest end, and shall be attached at eye level within 10 feet of plot center. In stands where eye-level stems do not exist within the 10-foot limit, attach one 3-foot or longer Witness Flag on a shrub or tree stem at least 3 feet high nearest the plot center, and two other 3-foot Witness Flags on the nearest tree or shrub stems at eye-height. It is permissible to place one Witness Flag on the tree to be measured on the plot nearest plot center when eye-level stems do not exist near plot center. If the plot is a "No Tally" plot, using the first eye-level stem along the travel route is permissible. This Witness Flag shall include the direction and approximate distance back to "No Tally" plot center, and direction and distance to the next plot. The color(s) of ribbon shall be as specified in the "Cruise Definitions" or in writing by the contract administrator.

Write the plot number, the cruiser initials, and date on the Witness Flag with a ***permanent-ink*** marker. The ink color for the marker shall contrast with the colors used in the ribbon.

Tree Data – All plots

All live trees with a dbh equal to or greater than the minimum main plot dbh. The first tree on the plot will be flagged or a vertical line placed on the tree. Fixed radius and BAF plot tree identification will continue in a clockwise sequence from the first measured tree. Fixed strip plot tree identification will continue in a zig zag pattern back to plot center from the first tree. The last tree on the first side of the strip will have a '1' entered in the comments of the tree record.

All plot radius, plot lengths, and limiting distance measurements are adjusted for slope to horizontal distance.

Required information for each sample tree:

1. **Tree #** – Number assigned to tree in sequence tallying clockwise from the first north tree.
2. **Species Code** – See "Species Code Table"
3. **Product Code** – See "Product Code Table.

4. **DBH** to nearest 1-inch class. For example, the 5-inch class will range from 4.6 to 5.59 inches.
5. **Merchantable or Stopper Height (MHt)** - Record to nearest ½ log in trees where highest product is limited due to defect or small end diameter inside bark. Regeneration and Cull products are to be recorded as a '0' merchantable height. Only broken top trees and trees with severe crook require the cruiser to enter a merchantable height call for pulpwood trees. All sawbolt and sawlog trees require the cruiser to enter a merchantable height call. Acceptable codes = 0, 1.0, 1.5, 2.0, 2.5, etc.
6. **Tree Count** – Number of trees with the same species, product, merchantable height, and total height combination. In most instances this will be recorded as '1' for 5"+ dbh trees. Having a tree count of greater than 1 is acceptable.
7. Each tree with a dbh class of 5"+ will be a single record in the tally sheet.
8. Trees with a fork below dbh will be tallied as two separate trees.
9. Trees which fork immediately above dbh will be tallied as one tree with the product calls being made only on the dominant stem.
10. Mark all "In" trees with a paint stick with a horizontal line at dbh and facing towards the plot center.
11. Trees measured for limiting distance and determined to be "Out" shall have an "X" marked on the tree at DBH and facing towards plot center.

All borderline trees shall be measured from the 'Center of the Tree' at the measured dbh and all distances shall be Horizontal (slope correction shall be applied as appropriate). Identifying the Limiting Distance point for all borderline trees using paint sticks or lumber crayons is encouraged. A horizontal line may be placed to show where DBH was measured with a vertical line crossing it to show the Center of the Tree. All trees determined to be borderline by the check cruiser will be verified using this mark when such trees are so marked.

Limiting distances for prism plot trees shall be computed using the measured dbh to the 1/10-inch times the Plot radius factor (PRF) for the prism or BAF being used. See Limiting Distance Chart. The dbh used to determine the limiting distance shall be the taped dbh as defined by the check cruiser. Limiting distances shall be computed using the DBH measured. If DBH measurement was moved up or down the stem due to stem irregularity limiting distance will be computed using the marked dbh.

Limiting distance for fixed plot radius trees shall use the defined Fixed Plot Size radius. The horizontal distance must be equal to or less than the Fixed Plot Size radius from the 'Center of the Tree' at measured dbh to plot center.

Tree Data - Total Height Trees

At least 7 trees per Predominant (top 3) species and 5 trees every other species across three different diameter classes greater than or equal to 5" dbh class need THt measurement in each stand. These trees should be selected across all plots in the stand as evenly distributed as

possible. If 7/5 trees per species are not obtainable in dbh classes equal to or greater than 5" trees less than 5" should be measured for total height to get tree count per species. Do not go off plot to obtain total height trees.

In addition to the data required for all plots above:

1. **Total Tree Height (THt)** - Record the total height (feet) for all trees in the plot to the tip of the tree. Trees should be measured to the highest tip of the tree live or dead.
2. If a fork crotch occurs at or above 4.5 feet on the high ground side the tree is treated as a single tree. Measure the height of the best fork.
3. If a tree is leaning total height is the true bole length from the high side of the stump to the tip of the tree.
4. **Height To Live Crown (HtToLiveCrown)** – Live Crown Base is defined below. Height to Live Crown is the length from the base of the tree to the Live Crown Base. All THt trees need a HtToLiveCrown measure and tally.

Cruise Compilation

After the plots are collected the inventory will be calculated at the stand level using the correct plot size/scale to expand the tree list into a stand level estimate using productive acres. As stated in the FMP the tree list will contain species, product, dbh class, total height, trees per acre, and basal area.

These stand level estimates will then be expanded into strata level estimates based on the strata assignment of the stand. This expansion could be based on just an average of the stand level estimates sampled or if acres are used in the stand selection process for sampling the acres will be used in the ratioing of the strata estimate from the cruised stands.

As noted in the sampling plot procedure only a subsample of total heights are collected in the sample. These sampled total heights will be used in a regression at the stand species dbh class level that takes the form below to calculate all total heights.

Total Height = EXP (b0 +b1/dbh)

The imputed coefficients of the regression will be used to calculate the total height for every dbh class by species. This regressed height is stored at the species and dbh class level for each stand sampled.

After the expansion of the strata level estimate to each stand the productive acres in each stand can be used in the mature forest monitoring and milestone process at each 10-year interval.

Appendix I: MFS Chapter 21 Rules – SWS for Timber Harvesting in Shoreland Areas

01 **DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**

669 **BUREAU OF FORESTRY (MAINE FOREST SERVICE)**

Chapter 21: **STATEWIDE STANDARDS FOR TIMBER HARVESTING AND RELATED ACTIVITIES IN SHORELAND AREAS**

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01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

669 BUREAU OF FORESTRY

Chapter 21: STATEWIDE STANDARDS FOR TIMBER HARVESTING AND RELATED ACTIVITIES IN SHORELAND AREAS

AUTHORITY: 12 M.R.S., chapter 805, subchapter 3-A; Public Laws 2003, chapter 335; Public Laws 2013, chapter 570

Summary: This rule establishes statewide standards for timber harvesting and related activities in shoreland areas. In general, timber harvesting activities in shoreland areas must protect shoreline integrity and not expose mineral soil that can be washed into water bodies, including nonforested freshwater and coastal wetlands and tidal waters. Timber harvesting and related activities in shoreland areas below the 300 acre drainage point must leave windfirm stands of trees that provide adequate shade. If located in shoreland areas, roads used primarily for timber harvesting and related activities must be constructed and maintained to standards designed to minimize the chance of exposed soil washing into water bodies, including wetlands. Stream crossings must not disrupt the natural flow of water and must not allow sediment into water bodies.

SECTION 1. PURPOSES

The purposes of this rule include the following: to establish statewide standards for timber harvesting and related activities in shoreland areas; to resolve inconsistencies among existing standards; to provide maximum opportunity for flexibility; to protect public resources while minimizing impacts on private resources; to further the maintenance of safe and healthful conditions; prevent and control water pollution from various agents, including sediment, temperature, toxic materials, and excessive nutrient inputs; to maintain shoreline stability; to protect fish spawning grounds, aquatic life, bird and other wildlife habitat; to protect freshwater and coastal wetlands; and to conserve natural beauty, open space, and public recreational values.

SECTION 2. AMENDMENTS TO MAINE FOREST SERVICE CHAPTER 20 RULE (FOREST REGENERATION AND CLEARCUTTING STANDARDS)

(Repealed)

SECTION 3. SCOPE AND APPLICABILITY

A. **SCOPE**. This rule governs all timber harvesting and related activities conducted in, over, or near water bodies, including rivers, streams, brooks, ponds, lakes, Great Ponds, freshwater and coastal wetlands, throughout the state, unless exempted in Section 3.C. of this rule.

B. **EXCLUSIONS.** The activities described in this subsection are not considered timber harvesting and must comply with the requirements for clearing or removal of vegetation

for activities other than timber harvesting under rules promulgated by the Department of Environmental Protection, Municipal Shoreland Zoning Ordinance or the Land Use Planning Commission, depending on which entity has jurisdiction.

1. Removal of vegetation in proximity to an existing developed area. For purposes of this provision, "developed area" means a footprint encompassing structures, access roads (other than land management roads), and maintained non-forested areas, on a lot with shore frontage on any great pond, stream, pond, river, or freshwater or coastal wetland. "In proximity to" describes an envelope around a developed area, and includes all areas that:

   a. are within 50 feet of the developed area,

   b. are between the developed area and the water body,

   c. occupy an area whose width in parallel with the shoreline extends 50 feet beyond each end of the footprint of the developed area at its widest point.

   In no case shall the envelope in proximity to a developed area be less than 20,000 square feet or less than 100 feet along the shoreline.

2. Removal of vegetation in the shoreland area from parcels less than two acres in size.

3. Removal of vegetation for the primary purpose of converting the land to a use other than forestland. If a change of land use occurs on the parcel or on any portion thereof within five years of the expiration of the Forest Operations Notification or the cessation of timber harvesting and related activities, whichever is later, the residual stand must comply with the requirements for clearing or removal of vegetation for activities other than timber harvesting under rules promulgated by the Department of Environmental Protection, Municipal Shoreland Zoning Ordinance or the Land Use Planning Commission, depending on which entity has jurisdiction. If the residual stand does not comply with these requirements after the change of land use, it constitutes prima facie evidence that a violation of the MFS Chapter 21 rule has occurred.

C. **EXEMPTION**. This rule does not govern timber harvesting and related activities in forested wetlands, unless the forested wetlands lie within a shoreland area.

D. **RELATIONSHIP TO OTHER LEGAL REQUIREMENTS**. Whenever provisions of this rule are less stringent than corresponding provisions of applicable federal, state, or municipal legal requirements, the more stringent provisions shall apply.

SECTION 4. DEFINITIONS

Unless otherwise provided herein, this rule incorporates by reference the definitions contained in MFS Rule Chapter 20 (*Forest Regeneration and Clearcutting Standards*). For the purpose of 12 M.R.S., chapter 805, subchapter 3-A and this rule, the following terms are defined as follows.

A. **Brook**: See "Stream Channel."

B. **Coastal Wetland** is defined by 38 M.R.S. §480-B (2) (Supp. 2013).

C. **Change of Land Use** means that following timber harvesting the subsequent primary use for a particular area is not growing forest products. Change of land use may include, but is not limited to, conversion to farm pasture, site for growing agricultural crops, residential dwelling unit, development site, or gravel pit. The division of forest land into smaller units does not by itself automatically constitute a change of land use.

D. **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 lines of the stream channel to the bottom of the channel.

E. **Crossing** means any timber harvesting and related activity involving the passage of ground-based equipment from one side to the opposite side of a water body, or to an island or upland within a water body. Such activities include, but are not limited to construction of roads, fords, bridges, and culverts, as well as maintenance work on these crossings.

F. **Designated Agent** means a person, company or other entity that is authorized by the landowner to act on the landowner's behalf for timber harvesting and related activities on the landowner's property.

G. **Disruption of shoreline integrity** means the alteration of the physical shape, properties, or condition of a shoreline at any location by timber harvesting and related activities. A shoreline where shoreline integrity has been disrupted is recognized by compacted, scarified and/or rutted soil, an abnormal channel or shoreline cross-section, and in the case of flowing waters, a profile and character altered from natural conditions.

H. **Essential Wildlife Habitat** means areas identified by the Commissioner, Maine Department of Inland Fisheries and Wildlife in accordance with the provisions of 12 M.R.S., §§12801 *et seq.*(2005 and Supp. 2013) and any Department of Inland Fisheries and Wildlife rules implementing that subchapter.

I. **Forested Wetland** means a freshwater wetland dominated by woody vegetation that is at least 20 feet tall.

J. **Forest Stand** means a contiguous group of trees sufficiently uniform in age class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

K. **Freshwater Wetland** means ponds, freshwater swamps, marshes, bogs and similar areas that are:

1. 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,

2. Not part of a Great Pond, coastal wetland, stream, or river.

L. **Great Pond** means any inland body of water which in a natural state has a surface area in excess of 10 acres, and any inland body of water artificially formed or increased which has a surface area in excess of 30 acres.

M. **Harvest Area** means the area where timber harvesting and related activities, including the cutting of trees, skidding, yarding, and associated road construction take place. The area affected by a harvest encompasses the area within the outer boundaries of these activities, excepting unharvested areas greater than 10 acres within the area affected by a harvest.

N. **Landowner** means a person, company, or other legal entity which holds title to land, including as a joint ownership or as tenants in common. Where the ownership of the timber located on the land is different than the fee ownership of the land itself, the owners of the timber are deemed a landowner and are jointly and severally responsible with the fee landowner to comply with this rule. Where a corporate landowner is a wholly owned subsidiary of another corporation, both parent and subsidiary are deemed the same landowner.

O. **Land Management Road** means a route or track consisting of a bed of exposed mineral soil, gravel, or other surfacing materials constructed for, or created by, the passage of motorized vehicles and used primarily for timber harvesting and related activities, including associated log yards, but not including skid trails or skid roads.

P. **Licensed Forester** means a forester licensed under 32 M.R.S. §5501(3) (Supp. 2013).

Q. **Normal High Water Line** means that line which is apparent from visible markings, changes in the character of soils due to prolonged action of the water or changes in vegetation, and which distinguishes between predominantly aquatic and predominantly terrestrial land. In the case of nonforested freshwater wetlands adjacent to streams and other water bodies, the normal high water line is the upland edge of the freshwater wetland, not the edge of the open water.

R. **Permanent crossing** means any structure constructed or erected with a fixed location, in, on, or over a water body for a period exceeding 7 months in any 12 month period, including, but not limited to, culverts and bridges.

S. **Pond** means any inland body of water which in a natural state has a surface area between 4,300 square feet and 10 acres.

T. **Responsible party** means all of the following persons or entities, jointly and severally:

1. The landowner, or landowners, who owned the property at the time a timber harvest subject to this rule was conducted;

2. The landowner’s designated agent at the time a timber harvest subject to this rule was conducted;

3. The Licensed Forester and/or the employer of the Licensed Forester who supervised a timber harvest subject to this rule; and

4. The timber harvester who conducted a timber harvest subject to this rule.

U. **Residual Stand** means a stand of trees remaining in the forest following timber harvesting and related activities.

V. **River** means a free-flowing body of water, including its associated flood plain wetlands, from that point at which it provides drainage for a watershed of:

1. fifty square miles to its mouth in the jurisdiction of the Land Use Planning Commission; and,

2. twenty-five square miles to its mouth in municipalities not subject to the jurisdiction of the Land Use Planning Commission.

W. **Shoreland area** means all land areas within:

1. 250 feet, horizontal distance, of the normal high water line of:

a. Rivers below the 50 square mile drainage point in the jurisdiction of the Land Use Planning Commission;

b. Rivers below the 25 square mile drainage point in municipalities not subject to the jurisdiction of the Land Use Planning Commission;

c. Great Ponds and nonforested freshwater wetlands 10 acres or larger;

d. Any coastal wetland;

e. Any size pond or freshwater wetland identified by the Department of Inland Fisheries and Wildlife as significant wildlife habitat or essential wildlife habitat;

2. 75 feet, horizontal distance, of the normal high water line of:

a. Streams between the 300 acre drainage point and the 50 square mile drainage point in the jurisdiction of the Land Use Planning Commission;

b. Streams between the 300 acre drainage point and the 25 square mile drainage point in municipalities not subject to the jurisdiction of the Land Use Planning Commission;

3. Adjacent to:

a. The normal high water line of streams above the 300 acre drainage point; and,

b. Ponds or freshwater wetlands larger than 4,300 square feet but less than 10 acres that are not identified by the Department of Inland Fisheries and Wildlife as significant wildlife habitat or essential wildlife habitat.

X. **Shoreline**: See “Normal High Water Line” and “Coastal Wetland.”

Y. **Significant wildlife habitat** is defined by 38 M.R.S §480-B (10) (Pamph. 2013).

Z. **Skid Road or Skid Trail** means a route repeatedly used by forwarding machinery or animal to haul or drag forest products from the stump to the yard or landing, the construction of which requires minimal excavation.

AA. **Slash** means the residue, e.g., treetops and branches, left on the ground after a timber harvest.

BB. **Stand**: see "Forest Stand."

CC. **Stream**: means a stream channel upstream from the point at which it becomes a river.

DD. **Stream channel** means a channel between defined banks created by the action of surface water, which is characterized by the lack of terrestrial vegetation or by the presence of a bed, devoid of topsoil, containing waterborne deposits or exposed soil parent material or bedrock; and which is connected hydrologically with other water bodies. “Stream channel” does not include rills or gullies forming because of accelerated erosion in disturbed soils where the natural vegetative cover has been removed by human activity.

EE. **Timber harvesting** means the cutting or removing of timber for the primary purpose of selling or processing forest products.

FF. **Timber harvesting and related activities** means timber harvesting, the construction and maintenance of roads used primarily for timber harvesting, and other activities conducted to facilitate timber harvesting.

GG. **Used for navigation** means those rivers, streams or brooks used by motorized watercraft.

HH. **Water body** means any river, stream, stream channel, brook, freshwater wetland, coastal wetland, pond, lake, Great Pond, or any other hydrological feature regulated by this rule.

II. **Woody Vegetation** means live trees or woody, non-herbaceous shrubs.

JJ. **Windfirm** means the ability of a forest stand to withstand strong winds and resist windthrow, wind rocking, and major breakage.

NOTE: In the context of this definition, an assessment of windfirmness will include assessment of soil conditions, depth to bedrock, and live crown ratios and height/diameter ratios on residual trees. Trees with live crown ratios of 30 percent or greater and/or trees with height/diameter ratios of 90 or less could be considered indicators of windfirmness.

SECTION 5. SHORELINE INTEGRITY AND SEDIMENTATION

A. **APPLICABILITY**. The requirements of Section 5 apply to all timber harvesting and related activities conducted in all shoreland areas as defined in this rule.

B. **STANDARDS**. Persons conducting timber harvesting and related activities in shoreland areas must take reasonable measures to avoid the disruption of shoreline integrity, the occurrence of sedimentation of water, and the disturbance of stream banks, stream

channels, shorelines, and soil lying within ponds and wetlands. If, despite such precautions, the disruption of shoreline integrity, sedimentation of water, or the disturbance of stream banks, stream channels, shorelines, and soil lying within ponds and wetlands occurs, such conditions must be corrected. This section does not apply to crossings of water bodies conducted in compliance with Section 11 of this rule.

NOTE: For guidance on reasonable measures, consult the Bureau publication, "Best Management Practices for Forestry: Protecting Maine's Water Quality" (2004). This publication is available from the Bureau and on the Bureau's website, www.maineforestservice.gov.

SECTION 6. SLASH TREATMENT

A. Timber harvesting and related activities shall be conducted such that slash or debris is not left below the normal high water line of any water body. This section does not apply to minor, incidental amounts of slash that result from timber harvesting and related activities otherwise conducted in compliance with this section.

B. No accumulation of slash shall be left within 50 feet of:

1. the normal high water line of Great Ponds, rivers, non-forested wetlands larger than 10 acres, and tidal waters in the jurisdiction of the Land Use Planning Commission; and,

2. the normal high water line of Great Ponds, rivers, non-forested wetlands larger than 10 acres, and tidal waters in municipalities not subject to the jurisdiction of the Land Use Planning Commission.

Slash actively used to protect soil from disturbance by equipment or to stabilize exposed soil may be left in place, provided no part thereof extends more than 4 feet above the ground.

C. Between 50 feet and 250 feet of the normal high water line of a water body identified in subsection 6.B. above, all slash larger than 3 inches in diameter must be disposed of in such a manner that no part thereof extends more than 4 feet above the ground.

SECTION 7. STANDARDS FOR TIMBER HARVESTING AND RELATED ACTIVITIES IN SHORELAND AREAS REQUIRING A 250-FOOT ZONE

A. **APPLICABILITY**. The requirements of Section 7 apply to all timber harvesting and related activities in shoreland areas within 250 feet, horizontal distance, of the normal high water line of:

1. Rivers below the 50 square mile drainage point in the jurisdiction of the Land Use Planning Commission

2. Rivers below the 25 square mile drainage point in municipalities not subject to the jurisdiction of the Land Use Planning Commission;

3. Great Ponds and nonforested freshwater wetlands 10 acres or larger;

4. Any coastal wetland; and,

5. Any size pond or freshwater wetland identified by the Department of Inland Fisheries and Wildlife as significant wildlife habitat or essential wildlife habitat.

B. **SHADE AND TREE RETENTION STANDARDS**

Timber harvesting and related activities in shoreland areas subject to the requirements of Section 7 must leave adequate tree cover and shall be conducted so that a well-distributed stand of trees is retained. The requirements of this section may be satisfied by following one of the following three options:

1. **Option 1 (40% volume removal)**, which requires:

   a. Harvesting of no more than 40 percent of the total volume on each acre involved of trees 4.5 inches DBH or greater in any 10 year period is permitted. For the purposes of these standards volume may be considered to be equivalent to basal area;

   b. A well-distributed stand of trees which is windfirm, and other vegetation including existing ground cover, must be maintained; and,

   c. Within 75 feet, horizontal distance, of the normal high water line of shoreland areas regulated under this section, there must be no cleared openings. At distances greater than 75 feet, horizontal distance, of the normal high water line, timber harvesting and related activities must not create single cleared openings greater than 14,000 square feet in the forest canopy. Where such openings exceed 10,000 square feet, they must be at least 100 feet apart. Such cleared openings will be included in the calculation of total volume removal. For the purposes of these standards, volume may be considered equivalent to basal area.

2. **Option 2 (60 square foot basal area retention)**, which requires:

   a. The residual stand must contain an average basal area of at least 60 square feet per acre of woody vegetation greater than or equal to 1.0 inch DBH, of which 40 square feet per acre must be greater than or equal to 4.5 inches DBH;

   b. A well-distributed stand of trees which is windfirm, and other vegetation including existing ground cover, must be maintained; and,

   c. Within 75 feet, horizontal distance, of the normal high water line of shoreland areas regulated under this section, there must be no cleared openings. At distances greater than 75 feet, horizontal distance, of the normal high water line, timber harvesting and related activities must not create single cleared openings greater than 14,000 square feet in the forest canopy. Where such openings exceed 10,000 square feet, they must be at least 100 feet apart. Such cleared openings will be included in

the calculation of total volume removal. For the purposes of these standards, volume may be considered equivalent to basal area.

3. **Option 3 (outcome based)**, which requires: An alternative method proposed in an application, signed by a Licensed Forester or certified wildlife professional, submitted by the landowner or designated agent to the Bureau and approved by the Bureau, which provides equal or better protection of the shoreland area than this rule.

Landowners must designate on the Forest Operations Notification form required by 12 M.R.S. §§8881 *et seq.* (Supp. 2013) which option they choose to use. If landowners choose Option 1 or Option 2, compliance with this section will be determined solely on the criteria for the option chosen. If landowners choose Option 3, timber harvesting and related activities may not begin until the Bureau has approved the required application.

The Bureau may verify that adequate tree cover and a well-distributed stand of trees is retained through a field procedure that uses sample plots that are located randomly or systematically to provide a fair representation of the harvest area.

SECTION 8. STANDARDS FOR TIMBER HARVESTING AND RELATED ACTIVITIES IN SHORELAND AREAS REQUIRING A 75-FOOT ZONE

A. **APPLICABILITY**. The requirements of Section 8 apply to all timber harvesting and related activities in shoreland areas within 75 feet, horizontal distance, of the normal high water line of:

1. Streams between the 300 acre drainage point and the 50 square mile drainage point in the jurisdiction of the Land Use Planning Commission; and,

2. Between the 300 acre drainage point and the 25 square mile drainage point in municipalities not subject to the jurisdiction of the Land Use Planning Commission.

B. SHADE AND TREE RETENTION STANDARDS

Timber harvesting and related activities in shoreland areas subject to the requirements of Section 8 must leave adequate tree cover and shall be conducted so that a well-distributed stand of trees is retained. The requirements of this section may be satisfied by following one of the following three options:

1. **Option 1 (40% volume removal)**, which requires:

   a. Harvesting of no more than 40 percent of the total volume on each acre involved of trees 4.5 inches DBH or greater in any 10 year period is permitted. For the purposes of these standards volume may be considered to be equivalent to basal area;

   b. A well-distributed stand of trees which is windfirm, and other vegetation including existing ground cover, must be maintained; and,

c. There must be no cleared openings.

2. **Option 2 (60 square foot basal area retention)**, which requires:

a. The residual stand must contain an average basal area of at least 60 square feet per acre of woody vegetation greater than or equal to 1.0 inch DBH, of which 40 square feet per acre must be greater than or equal to 4.5 inches DBH;

b. A well-distributed stand of trees which is windfirm, and other vegetation including existing ground cover, must be maintained; and,

c. There must be no cleared openings.

3. **Option 3 (outcome based)**, which requires: An alternative method proposed in an application, signed by a Licensed Forester or certified wildlife professional, submitted by the landowner or designated agent to the Bureau and approved by the Bureau, which provides equal or better protection of the shoreland area than this rule.

Landowners must designate on the Forest Operations Notification form required by 12 M.R.S. §§8881 *et seq.* (Supp. 2013) which option they choose to use. If landowners choose Option 1 or Option 2, compliance with this section will be determined solely on the criteria for the option chosen. If landowners choose Option 3, timber harvesting and related activities may not begin until the Bureau has approved the required application.

The Bureau may verify that adequate tree cover and a well-distributed stand of trees is retained through a field procedure that uses sample plots that are located randomly or systematically to provide a fair representation of the harvest area.

4. **Exception**. Timber harvesting and related activities conducted in the jurisdiction of the Land Use Planning Commission between the 300 acre drainage point and the 25 square mile drainage point are not subject to the requirements of Section 8.B. of this rule, but must be conducted to retain sufficient vegetation to maintain shading of surface waters.

SECTION 9. SKID TRAILS, YARDS, AND EQUIPMENT OPERATION

A. **APPLICABILITY**. The requirements of Section 9 apply to the construction, maintenance, and use of skid trails and yards in shoreland areas. This section does not apply to crossings of water bodies conducted in compliance with Section 11 of this rule.

B. **STREAM CHANNELS**. Equipment used in timber harvesting and related activities shall not use stream channels as travel routes except when:

1. surface waters are frozen and snow covered; and,

2. the activity will not result in any ground disturbance.

C. **DESIGN, CONSTRUCTION, AND CLOSEOUT**. Skid trails and yards must be designed and constructed to prevent sediment and concentrated water runoff from entering a water body. Upon termination of their use, skid trails and yards must be stabilized.

D. **SETBACKS**

1. Except for crossings of stream channels or freshwater wetlands, equipment used in timber harvesting and related activities, including but not limited to the use of skid trails and yards, must be operated to avoid the exposure of mineral soil within 25 feet of any water body or wetland regulated by this rule. On slopes of 10 percent or greater, the setback for equipment operation must be increased by 20 feet, plus an additional 10 feet for each 5 percent increase in slope above 10 percent. These requirements are presented in an alternative format in the slope table in Section 12 of this rule.

2. The provisions of this subsection apply only to a face sloping toward the water body or freshwater or coastal wetland, provided, however, that no portion of such exposed mineral soil on a back face is closer than 25 feet from the normal high water line of a water body or upland edge of a freshwater or coastal wetland. The setback requirements of this subsection shall not apply to skid trail approaches to crossings of stream channels or freshwater wetlands.

3. Where such setbacks are impracticable, appropriate techniques shall be used to avoid sedimentation of the water body or wetland. Such techniques may include the installation of sump holes or settling basins, and/or the effective use of additional ditch relief culverts and ditch water turnouts placed to avoid sedimentation of the water body or wetland. If, despite such precautions, sedimentation or the disruption of shoreline integrity occurs, such conditions must be corrected.

E. **Exception**. Timber harvesting and related activities in shoreland areas of streams draining less than 300 acres and wetlands adjacent to such streams may be conducted in a manner not in conformity with the setback requirements of the foregoing subsections provided persons conducting such activities take reasonable measures to avoid the disruption of shoreline integrity, the occurrence of sedimentation of water, and the disturbance of stream banks, stream channels, shorelines, and soil lying within ponds and wetlands. If, despite such precautions, the disruption of shoreline integrity, sedimentation of water, or the disturbance of stream banks, stream channels, shorelines, and soil lying within ponds and wetlands occurs, such conditions must be corrected.

NOTE: For guidance on reasonable measures, consult the Bureau publication, “Best Management Practices for Forestry: Protecting Maine’s Water Quality” (2004). This publication is available from the Bureau and on the Bureau’s website, www.maineforestservice.gov.

SECTION 10. LAND MANAGEMENT ROAD CONSTRUCTION AND MAINTENANCE STANDARDS

A. **APPLICABILITY**. The requirements of Section 10 apply to the construction, maintenance, and use of land management roads in shoreland areas. This section does not apply to crossings of water bodies conducted in compliance with Section 11 of this rule.

B. **ROAD DESIGN, CONSTRUCTION, AND MAINTENANCE**. Land management roads, including approaches to crossings of stream channels and freshwater wetlands, ditches and other related structures, must be designed, constructed, and maintained to prevent sediment and concentrated water runoff from directly entering the water body. Surface water on or adjacent to crossing approaches must be diverted through vegetative filter strips to avoid sedimentation of the watercourse. Because roadside ditches may not extend to the resource being crossed, filter strips must be established in accordance with the slope table in Section 12 of this rule.

C. **SETBACKS**. Land management roads and associated ditches, excavation, and fill must be set back at least:

1. 100 feet from the normal high-water line of a Great Pond or a river that flows to a Great Pond, rivers draining more than 50 square miles in the jurisdiction of the Land Use Planning Commission, rivers draining more than 25 square miles in municipalities not subject to the jurisdiction of the Land Use Planning Commission, nonforested freshwater wetlands 10 acres or larger, any coastal wetland, and any pond or freshwater wetland identified by the Department of Inland Fisheries and Wildlife as significant wildlife habitat or essential wildlife habitat;

2. 50 feet from the normal high water line of streams draining more than 300 acres but less than 50 square miles in the jurisdiction of the Land Use Planning Commission and streams below the 300 acre drainage but above the 25 square mile drainage point in municipalities not subject to the jurisdiction of the Land Use Planning Commission; and,

3. 25 feet from the normal high water line of streams draining less than 300 acres and ponds or freshwater wetlands larger than 4,300 square feet but less than 10 acres that are not identified by the Department of Inland Fisheries and Wildlife as significant wildlife habitat or essential wildlife habitat.

4. **Exceptions**

a. The minimum 100 foot setback specified in subsection 1 above may be reduced to no less than 50 feet, if, prior to construction, the landowner or the landowner's designated agent demonstrates to the Bureau's satisfaction that no reasonable alternative exists and that appropriate techniques will be used to prevent sedimentation of the water body. Such techniques may include, but are not limited to, the installation of settling basins, and/or the effective use of additional ditch relief culverts and turnouts placed to avoid sedimentation of the water body. If, despite such precautions, sedimentation or the disruption of shoreline integrity occurs, such conditions must be corrected.

b. The minimum 50 foot setback specified in subsection 2 above may be reduced to no less than 25 feet, if, prior to construction, the landowner or the landowner's designated agent demonstrates to the Bureau's satisfaction that no reasonable alternative exists and that appropriate techniques will be used to prevent sedimentation of the water body. Such techniques may include, but are not limited to, the installation of settling

basins, and/or the effective use of additional ditch relief culverts and turnouts placed to avoid sedimentation of the water body or the disruption of shoreline integrity. If, despite such precautions, sedimentation or the disruption of shoreline integrity occurs, such conditions must be corrected.

5. On slopes of 10 percent or greater, the land management road setback must be increased by at least 20 feet, plus an additional 10 feet for each 5 percent increase in slope above 10 percent, but in no case may the land management road setback be less than that indicated in the slope table presented in Section 12 of this rule.

6. New land management roads are not permitted within the shoreland area along Significant River Segments as identified in 38 M.R.S. §437 (Supp. 2013), nor in Resource Protection Districts as identified in municipal shoreland zoning ordinances nor in Recreation Protection Subdistricts (P-RR) as identified by the Land Use Planning Commission, unless, prior to construction, the landowner or the landowner's designated agent makes a clear demonstration to the Bureau's satisfaction that no reasonable alternative route exists outside the shoreland zone, and that the new road must be set back as far as practicable from the normal high water line and screened from the river by existing vegetation.

D. **MAINTENANCE**. Ditches, culverts, bridges, dips, water turnouts and other water control installations associated with roads must be maintained on a regular basis to assure effective functioning. Drainage structures shall deliver a dispersed flow of water into an unscarified filter strip no less than the width indicated in the slope table set forth in Section 12 of this rule. Where such filter strip is impracticable, appropriate techniques shall be used to avoid sedimentation of the water body or wetland. Such techniques may include the installation of sump holes or settling basins, and/or the effective use of additional ditch relief culverts and ditch water turnouts placed to avoid sedimentation of the water body or wetland. If, despite such precautions, sedimentation or the disruption of shoreline integrity occurs, such conditions must be corrected.

E. **ROAD CLOSEOUT AND DISCONTINUANCE**. Maintenance of the water control installations required above must continue until use of the road is discontinued and the road is put to bed by effective installation of water bars or other adequate road drainage structures at appropriate intervals, constructed to avoid surface water flowing over or under the water bar, and extending sufficient distance beyond the traveled way so that water does not reenter the road surface.

F. **UPGRADING EXISTING ROADS**. Extension or enlargement of presently existing roads must conform to the provisions of this section. Any nonconforming existing road may continue to exist and to be maintained, as long as the nonconforming conditions are not made more nonconforming.

Exception. Extension or enlargement of presently existing roads need not conform to the setback requirements of Section 10.C if, prior to extension or enlargement, the landowner or the landowner's designated agent demonstrates to the Bureau's satisfaction that no reasonable alternative exists and that appropriate techniques will be used to prevent sedimentation of the water body. Such techniques may include, but are not limited to, the installation of settling basins, and/or the effective use of additional ditch relief culverts and turnouts placed to avoid sedimentation of the water body. If, despite such

precautions, sedimentation or the disruption of shoreline integrity occurs, such conditions must be corrected.

G. **ADDITIONAL MEASURES**. In addition to the foregoing minimum requirements, persons undertaking construction and maintenance of roads and stream crossings must take reasonable measures to avoid sedimentation of surface waters.

NOTE: For guidance on reasonable measures, consult the Bureau publication, "Best Management Practices for Forestry: Protecting Maine's Water Quality" (2004). This publication is available from the Bureau and on the Bureau's website, www.maineforestservice.gov.

SECTION 11. CROSSINGS OF WATER BODIES

A. **APPLICABILITY**. The requirements of Section 11 apply to all crossings of stream channels, rivers, ponds, lakes, Great Ponds, nonforested freshwater wetlands, coastal wetlands, and freshwater wetlands identified by the Department of Inland Fisheries and Wildlife as significant wildlife habitat or essential wildlife habitat.

B. **ALL CROSSINGS**

1. Crossings must allow for fish passage at all times of the year, must not impound water, and must allow for the maintenance of normal stream flows.

2. **Determination of flow**. Provided they are properly applied and used for the circumstances for which they are designed, methods including but not limited to the following are acceptable to the Bureau as means of calculating the 10 year and 25 year frequency water flows and thereby determining crossing sizes as required in this section: The United States Geological Survey (USGS) Methods; specifically: Hodgkins, G. 1999. *Estimating the Magnitude of Peak Flows for Streams in Maine for Selected Recurrence Intervals*. U.S. Geological Survey. Water Resources Investigations Report 99-4008. 45 pp.

3. **Upgrading existing crossings**. Extension or enlargement of presently existing crossings must conform to the provisions of this section. Any nonconforming existing crossing may continue to exist and be maintained, as long as the nonconforming conditions are not made more nonconforming; however, any maintenance or repair work done below the normal high water line must conform to the provisions of this section.

4. **Bureau Permits and Permit by Rule**

a. **Permits**. An application for a permit must be submitted to the Bureau at least 60 days prior to the construction of any new permanent crossing or the replacement of a permanent crossing of any waterbody subject to a 250' shoreland area as defined by §(4)(W)(1) of this rule, non-forested freshwater wetlands larger than 4,300 square feet and any crossing that will not conform to permit by rule standards. An individual permit application is required for each crossing. The permit application must contain all information required by the Bureau, including a description of how negative impacts to the resource will be avoided and minimized to

the extent practicable. When granting a permit the Bureau may impose such reasonable terms and conditions as the Bureau considers appropriate in order to satisfy the purpose set forth in its governing statutes and rules.

b. **Permit by Rule**. Crossings must conform to standards of this section to qualify for permit by rule. If a crossing does not conform to these standards an application for a full permit must be submitted per §(11)(B)(4)(a) above. A permit by rule must be submitted to the Bureau prior to construction, maintenance, alteration, and replacement of permanent crossings of waterbodies subject to a 75' shoreland area or adjacent shoreland area as defined by §(4)(W)(2) and (3) of this rule except all non-forested freshwater wetlands greater than 4,300 square feet which require a permit as described in §(11)(B)(4)(a). Multiple crossings within one township or municipality may be submitted on one permit by rule form. The permit by rule must contain all information required by the Bureau, including:

i. a map showing the location of all proposed permanent crossings. Maps must be of sufficient quality and scale for a person unfamiliar with the area to locate the crossing;

ii. for any temporary or permanent crossing that requires a permit from state or federal agencies, a copy of the approved permit or permits; and,

iii. a statement signed by the permit applicant that all temporary and permanent crossings will be constructed, maintained, and closed out in accordance with the requirements of this chapter.

c. **Exception** A permit or permit by rule is not required for the repair and maintenance of an existing crossing or for the replacement of an existing crossing, including ancillary crossing installation activities such as excavation and filling, in any protected natural resource area, as long as:

i. Erosion control measures are taken to prevent sedimentation of the water;

ii. The crossing does not block passage for fish in the protected natural resource area;

iii. For replacement crossings of a river, stream or brook:

a. The replacement crossing is designed, installed and maintained to match the natural stream grade to avoid drops or perching; and

b. As site conditions allow, crossing structures that are not open bottomed are embedded in the stream bottom at least 25% of the culvert or other structure's diameter, except that a crossing structure does not have to be embedded more than 2 feet.

iv. The Bureau is notified prior to the activity in accordance with §(11)(B)(6) of this rule.

For purposes of this subsection, "repair and maintenance" includes but is not limited to the riprapping of side slopes or culvert ends; removing debris and blockages within the crossing structure and at its inlet and outlet; and installing or replacing culvert ends if less than 50% of the crossing structure is being replaced.

5. **Other Agency Permits**

a. Any timber harvesting and related activities involving the design, construction, and maintenance of crossings on water bodies other than a stream channel or river, including crossings of Significant River Segments and freshwater wetlands identified by the Department of Inland Fisheries and Wildlife as significant wildlife habitat or essential wildlife habitat, may require a permit from the US Army Corps of Engineers. When a permit is required, the crossing is not required to meet the standards of this section provided it conforms with all applicable state and federal requirements and any permit conditions.

b. Any timber harvesting and related activities involving the design, construction, and maintenance of crossings of freshwater wetlands identified by the Department of Inland Fisheries and Wildlife as essential wildlife habitat require prior consultation with the Department of Inland Fisheries and Wildlife.

6. **Notice to Bureau**. Notification to the Bureau is required prior to construction, maintenance, alteration, and replacement of crossings. Written notice of all temporary and permanent water body crossing construction, maintenance, alteration, and replacement activities in shoreland areas regulated by this rule must be given to the Bureau prior to the commencement of such activities. Multiple crossings within one township or municipality may be submitted on one notification form. Such notice must contain all information required by the Bureau, including:

a. a map showing the location of all proposed permanent crossings. Maps must be of sufficient quality and scale for a person unfamiliar with the area to locate the crossing;

b. for any temporary or permanent crossing that requires a permit from state or federal agencies, a copy of the approved permit or permits; and,

c. a statement signed by the responsible party that all temporary and permanent crossings will be constructed, maintained, and closed out in accordance with the requirements of this chapter.

C. SKID TRAIL CROSSINGS

1. **Design and Construction**

a. All skid trail crossings of streams and rivers below the 25 square mile drainage point require a bridge or culvert sized according to the requirements of subsection 2 below.

b. Streams above the 25 square mile drainage point may be crossed using temporary structures that are not bridges or culverts but which meet the requirements of the following subsection c; or

i. when stream channels are frozen and snow-covered; or

ii. when stream channels are composed of a hard surface which will not be eroded or otherwise damaged.

c. All skid trail crossings of streams must be designed, constructed, and maintained, such that:

i. sedimentation of surface waters is reasonably avoided;

ii. there is no substantial disturbance of the bank or stream channel;

iii. fish passage is not impeded; and,

iv. water flow is not unreasonably impeded.

NOTE: For guidance on reasonable measures, consult the Bureau publication, "Best Management Practices for Forestry: Protecting Maine's Water Quality" (2004). This publication is available from the Bureau and on the Bureau's website, www.maineforestservice.gov.

2. **Bridge and Culvert Sizing**. The following requirements apply to skid trail crossings of stream channels when surface waters are unfrozen:

a. Bridges and culverts must be installed and maintained to provide an opening sufficient in size and structure to accommodate 25 year frequency water flows or with a cross-sectional area at least equal to 3times the cross-sectional area of the stream channel.

b. Temporary bridge and culvert sizes may be smaller than provided in subsection a above if techniques are effectively employed such that in the event of culvert or bridge failure, the natural course of water flow is maintained and sedimentation of the water body is avoided. Such crossing structures must be at least as wide as the channel and, if not culverts, placed above the normal high water line. Techniques may include, but are not limited to, the effective use of any, a combination of, or all of the following:

i. use of temporary skidder bridges;

ii. removing culverts prior to the onset of frozen ground conditions;

iii. using water bars in conjunction with culverts;

iv. using road dips in conjunction with culverts.

c. Culverts utilized in stream crossings must:

i. be installed at or below stream bed elevation;

ii. be seated on firm ground;

iii. have soil compacted at least halfway up the side of the culvert;

iv. be covered by soil to a minimum depth of 1 foot or according to the culvert manufacturer's specifications, whichever is greater; and

v. have a headwall at the inlet end which is adequately stabilized by rip-rap or other suitable means to reasonably avoid erosion of material around the culvert.

NOTE: For guidance on reasonable measures, consult the Bureau publication, "Best Management Practices for Forestry: Protecting Maine's Water Quality" (2004). This publication is available from the Bureau and on the Bureau's website, www.maineforestservice.gov.

d. Stream crossings allowed under this section, but located in flood hazard areas (i.e. A zones) as identified on a community's Flood Insurance Rate Maps (FIRM) or Flood Hazard Boundary Maps (FHBM), must be designed and constructed under the stricter standards contained in that community's National Flood Insurance Program (NFIP). For example, a crossing may be required to pass a 100-year flood event.

3. **Closeout**. Upon completion of timber harvesting and related activities, or upon the expiration of a Forest Operations Notification, whichever is earlier, the following requirements apply:

a. Bridges and culverts installed for stream crossings by skid trails must either:

i. comply with the standards for stream channel crossings by land management roads as set forth in this rule, or

ii. be removed and areas of exposed soil stabilized.

b. Crossing structures that are not bridges or culverts must either:

i. be removed immediately following timber harvesting and related activities, or,

ii. if frozen into the stream bed or bank, as soon as practical after snowmelt.

c. Stream channels, banks and approaches to crossings of water bodies must be immediately stabilized on completion of harvest, or if the ground is frozen and/or snow-covered, as soon as practical after snowmelt. If,

despite such precautions, sedimentation or the disruption of shoreline integrity occurs, such conditions must be corrected.

4. **Freshwater wetlands**. Skid trail crossings, other than those areas below the normal high water line of water bodies, must avoid freshwater wetlands and must maintain the existing hydrology of such wetlands, unless there are no reasonable alternatives, as determined by the Bureau in a written decision prior to construction.

5. **Exception**. Timber harvesting and related activities in shoreland areas of streams draining less than 300 acres and wetlands adjacent to such streams may be conducted in a manner not in conformity with the requirements of the foregoing subsections provided persons conducting such activities take reasonable measures to avoid the disruption of shoreline integrity, the occurrence of sedimentation of water, and the disturbance of stream banks, stream channels, shorelines, and soil lying within ponds and wetlands. If, despite such precautions, the disruption of shoreline integrity, sedimentation of water, or the disturbance of stream banks, stream channels, shorelines, and soil lying within ponds and wetlands occurs, such conditions must be corrected

NOTE: For guidance on reasonable measures, consult the Bureau publication, "Best Management Practices for Forestry: Protecting Maine's Water Quality" (2004). This publication is available from the Bureau and on the Bureau's website, www.maineforestservice.gov.

D. LAND MANAGEMENT ROAD STREAM CROSSINGS

1. **Design, construction, and maintenance**. Land management road stream channel crossings, including approaches to stream channel crossings, ditches and other related structures, must be designed, constructed, and maintained such that:

   a. concentrated water runoff does not enter the water body or tributary stream;

   b. sedimentation of surface waters is reasonably avoided;

   c. there is no substantial disturbance of the stream bank or stream channel not directly associated with culvert or bridge installation;

   d. fish passage is not impeded; and,

   e. water flow is not unreasonably impeded.

   NOTE: For guidance on reasonable measures, consult the Bureau publication, "Best Management Practices for Forestry: Protecting Maine's Water Quality" (2004). This publication is available from the Bureau and on the Bureau's website, www.maineforestservice.gov.

2. **Bridge and culvert sizing**. The following requirements apply to land management road crossings of stream channels when surface waters are unfrozen:

   a. Bridges and culverts must be installed and maintained to provide an opening sufficient in size and structure to accommodate 25 year

frequency water flows or with a cross-sectional area at least equal to 3times the cross-sectional area of the stream channel.

b. Culverts utilized in stream crossings must:

i. be installed at or below stream bed elevation;

ii. be seated on firm ground;

iii. have soil compacted at least halfway up the side of the culvert;

iv. be covered by soil to a minimum depth of 1 foot or according to the culvert manufacturer's specifications, whichever is greater; and

v. have a headwall at the inlet end which is adequately stabilized by rip-rap or other suitable means to reasonably avoid erosion of material around the culvert.

c. If a perennial water course to be crossed is to be used for navigation, the crossing must consist of a bridge span or pipe arch with at least 4 feet of clearance during normal high water for boat traffic.

d. If the stream being crossed is a perennial watercourse and has a slope of more than 2%, a bridge or pipe arch must be used to maintain the natural streambed.

e. Fill sideslopes in a stream or floodplain wetland must be maintained at a slope no shallower than 3 horizontal to 1 vertical and no steeper than 1.5 horizontal to 1 vertical. Fill side slopes must be stabilized at the completion of the activity.

NOTE: For guidance on reasonable measures, consult the Bureau publication, “Best Management Practices for Forestry: Protecting Maine’s Water Quality” (2004). This publication is available from the Bureau and on the Bureau’s website, www.maineforestservice.gov.

f. Temporary bridge and culvert sizes may be smaller than provided in subsection a above if techniques are effectively employed such that in the event of culvert or bridge failure, the natural course of water flow is maintained and sedimentation of the water body is avoided. Such crossing structures must be at least as wide as the channel and, if not culverts, placed above the normal high water line. Techniques may include, but are not limited to, the effective use of any, a combination of, or all of the following:

i. use of temporary skidder bridges;

ii. removing culverts prior to the onset of frozen ground conditions;

iii. using water bars in conjunction with culverts; and/or,

iv. using road dips in conjunction with culverts.

3. Stream crossings allowed under this section, but located in flood hazard areas (i.e. A zones) as identified on a community's Flood Insurance Rate Maps (FIRM) or Flood Hazard Boundary Maps (FHBM), must be designed and constructed under the stricter standards contained in that community's National Flood Insurance Program (NFIP). For example, a crossing may be required to pass a 100-year flood event.

4. **Road closeout and discontinuance**. Maintenance of the water control installations required above must continue until use of the road is discontinued and the road is put to bed by taking the following actions:

a. Effective installation of water bars or other adequate road drainage structures at appropriate intervals, constructed to reasonably avoid surface water flowing over or under the water bar, and extending sufficient distance beyond the traveled way so that water does not reenter the road surface.

b. Crossing structures must be appropriately sized or dismantled and removed in a manner that reasonably avoids sedimentation of the water body.

c. Any bridge or water crossing culvert in roads to be discontinued shall satisfy one of the following requirements:

i. it shall be designed to provide an opening sufficient in size and structure to accommodate 25 year frequency water flows;

ii. it shall be designed to provide an opening with a cross-sectional area at least 3 1/2 times the cross-sectional area of the stream channel; or

iii. it shall be dismantled and removed in a fashion to reasonably avoid sedimentation of the water body.

If, despite such precautions, sedimentation or the disruption of shoreline integrity occurs, such conditions must be corrected.

NOTE: For guidance on reasonable measures, consult the Bureau publication, “Best Management Practices for Forestry: Protecting Maine’s Water Quality” (2004). This publication is available from the Bureau and on the Bureau’s website, www.maineforestservice.gov.

5. **Freshwater wetlands**. Land management road crossings, other than those areas below the normal high water line of water bodies, must avoid freshwater wetlands and must maintain the existing hydrology of such wetlands, unless there are no reasonable alternatives, as determined by the Bureau in a written decision.

SECTION 12. SLOPE TABLE

Filter strips, skid trail setbacks, and land management road setbacks must be maintained as specified in the rule, but in no case shall be less than shown in the following table.

Average slope of land between exposed mineral soil and normal high water line (percent)	**Width of strip between exposed mineral soil and normal high water line (feet along surface of the ground)**
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70	165

SECTION 13. RESPONSIBILTY

All responsible parties as set forth in §(4)(T)(1)-(4) of this rule may be jointly and severally responsible for compliance with this rule, and liable for violations of this rule.

SECTION 14. VARIANCE

A variance to the strict application of this rule may be granted as specified in MFS Rule Chapter 20 (“Forest Regeneration and Clearcutting Standards”, Section 6).

SECTION 15. VIOLATIONS

Any responsible party, including but not limited to a landowner, a landowner's agent or a contractor, who orders, contracts for, or conducts any activity in violation of this rule commits a civil violation, and shall be penalized in accordance with 12 M.R.S., chapter 809.

SECTION 16. EFFECTIVE DATE

A. The effective date of this rule in organized municipalities that have either accepted the statewide standards in accordance with 38 M.R.S. §438-B, sub-§2 or have adopted an ordinance identical to the statewide standards in accordance with 38 M.R.S. §438-B, sub-§3 is January 1, 2016.

B. The effective date of this rule in a municipality that either accepts the statewide standards in accordance with 38 M.R.S. §438-B, sub-§2 or adopts an ordinance identical to the statewide standards in accordance with 38 M.R.S. §438-B, sub-§3 after the effective date

specified in subsection A is the date the municipality's shoreland zoning ordinance is certified by the Commissioner of the Department of Environmental Protection.

C. The effective date of this rule in the jurisdiction of the Land Use Planning Commission is the first day of January of the second year following the year in which the Commissioner of Conservation Agriculture, Conservation and Forestry determines that at least 252 of the 336 municipalities identified by the Commissioner of Conservation as the municipalities with the highest acreage of timber harvesting activity on an annual basis for the period 1999-2003 have either accepted the statewide standards in accordance with 38 MRSA M.R.S. §438-B, sub-§2 or have adopted an ordinance identical to the statewide standards in accordance with 38 MRSA M.R.S. §438-B, sub-§3. Within 30 days of making the determination that the 252-municipality threshold has been met, the Commissioner of Conservation shall notify the Secretary of State in writing and advise the secretary of the effective date for the statewide standards.

Timber harvesting and related activities are not subject to this rule if, prior to the effective date of the rule, (1) notification has been filed with and accepted by the Bureau, and (2) timber harvesting has begun. Timber harvesting and related activities not subject to this rule are subject to the rules of the proper authority that were in effect at the time notification was filed and accepted by the Bureau and timber harvesting began.

STATUTORY AUTHORITY: 12 M.R.S. ch. 805 sub-ch. 3-A; P.L. 2003 ch. 335; P.L. 2013, ch. 570

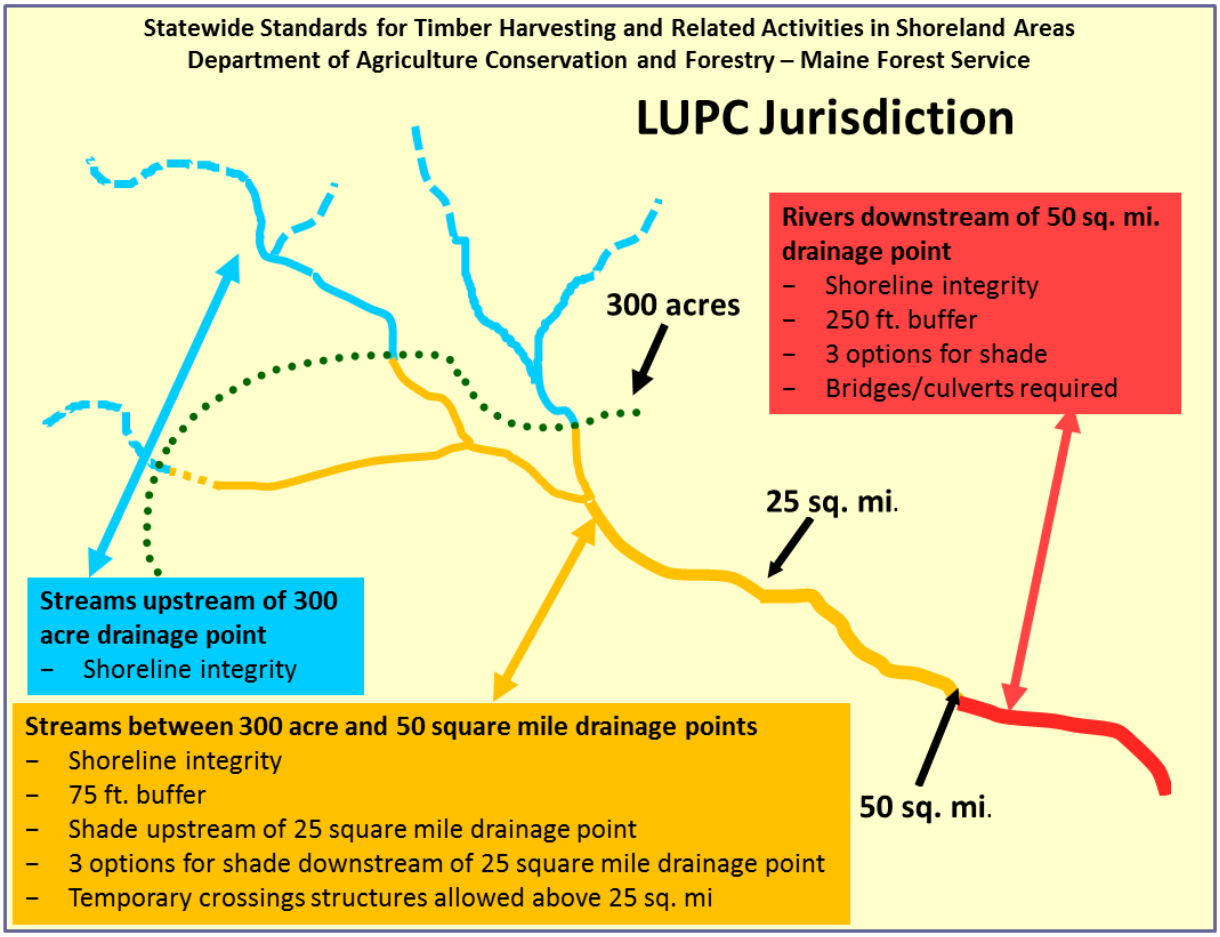
RECEIVED June 16, 2005 – filing 2005-235

CORRECTIONS:
February, 2014 – agency names, formatting

AMENDED:
August 30, 2015 – filing 2015-139 (Final adoption, major substantive)

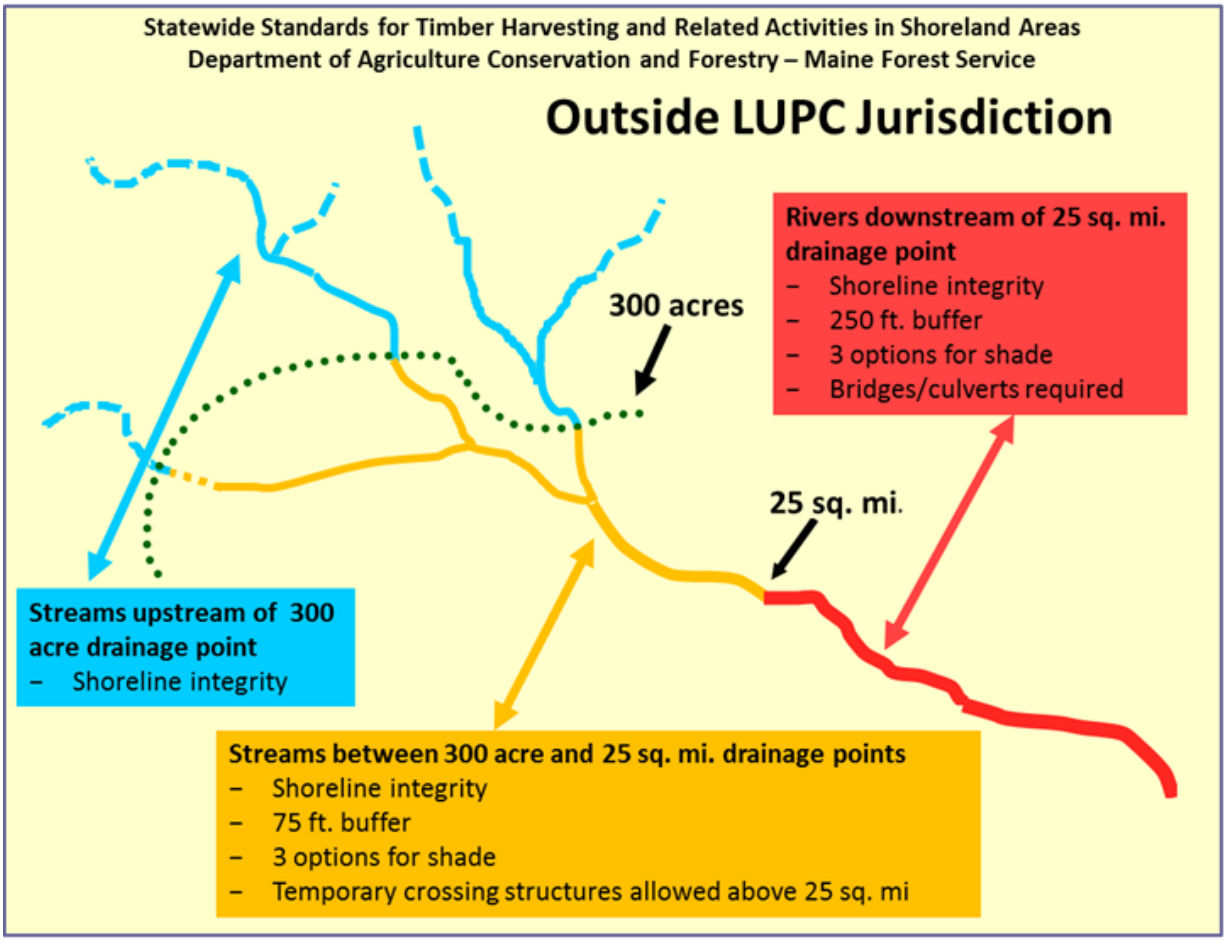
APPENDIX 1. DIAGRAMS OF APPLICATION OF THIS RULE

Figure 1. Application of this rule in the jurisdiction of the Land Use Planning Commission



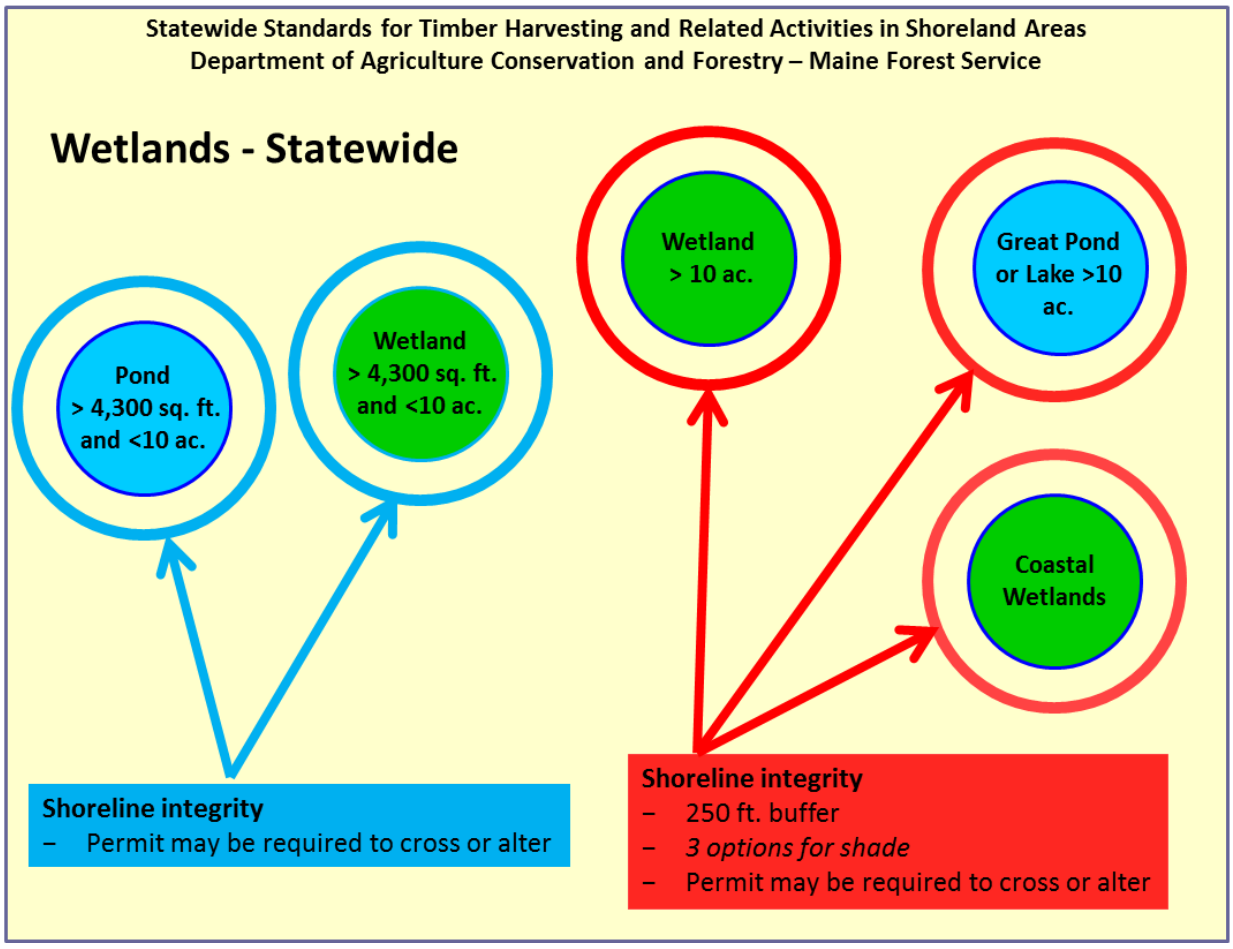
NOTE: This diagram is for informational purposes only. In the case of discrepancies, the written rule shall govern.

Figure 2. Application of this rule in municipalities not subject to the jurisdiction of the Land Use Planning Commission



Note: This diagram is for informational purposes only. In the case of discrepancies, the written rule shall govern.

Figure 3. Application of this rule to wetlands statewide



Note: This diagram is for informational purposes only. In the case of discrepancies, the written rule shall govern.

Appendix J: Cold Stream Rights of Way Access

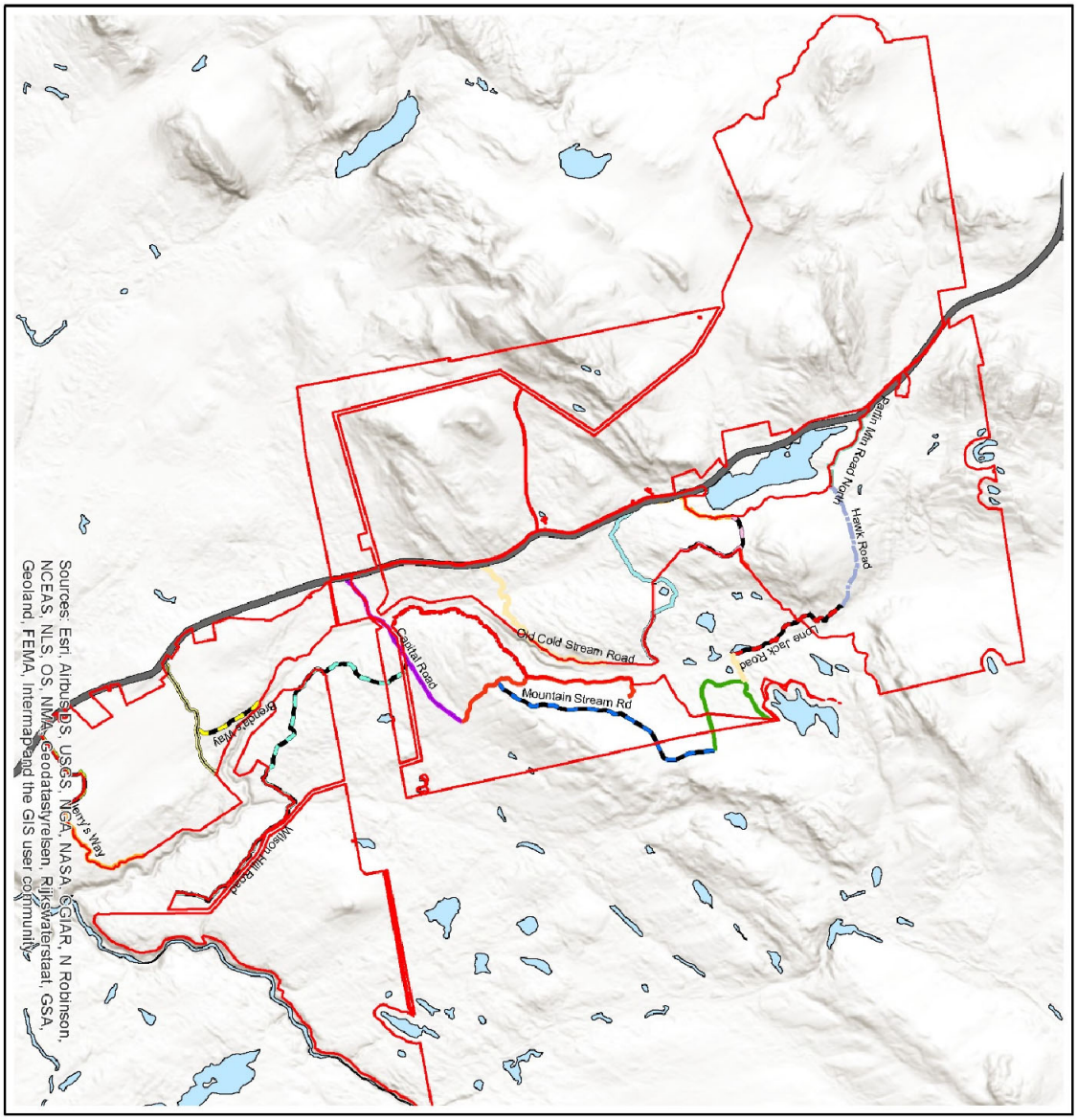


EXHIBIT E

June 12, 2025

Dawn Hallowell
Director, Southern Maine Regional Office
Maine Department of Environmental Protection
312 Canco Road
Portland, ME 04103

RE: NECEC Conservation Plan – Opportunity for Comment

Dear Ms. Hallowell,

Thank you for the opportunity to provide public comments on the New England Clean Energy Connect (NECEC) Conservation Plan ("Plan") submitted by NECEC Transmission LLC ("NECEC LLC") to the Maine Department of Environmental Protection (DEP) on May 9, 2025.

As required by Condition #39 of the May 11, 2020 Maine DEP Order ("DEP Order") and Condition #10 of the July 21, 2022 Maine Board of Environmental Protection (BEP) Order ("BEP Order"), NECEC LLC is required to conserve at least 50,000 acres in the vicinity of Segment 1 of the NECEC project subject to certain requirements.

This is a pivotal, highly consequential condition that is required of the NECEC project as compensation for the fragmenting effects of the transmission line on habitat in the region of Segment 1 and the related edge effects of the project. The importance of the Plan is illustrated by the fact that the *only* substantive modification that the BEP made to the DEP permit on appeal was to *increase* the acreage of the required conservation land by 10,000 acres, from 40,000 acres (an 8:1 ratio of conservation to impacted land) to 50,000 acres (a 10:1 ratio).

The Plan submitted by NECEC LLC on May 9, 2025, serves as a condition compliance submission. The DEP's role now is to evaluate whether the Plan meets the compliance requirements set forth in Condition #39 of the DEP Order and Condition #10 of the BEP Order.

Overall Evaluation

After careful review of NECEC LLC's submission, we conclude that the Plan fails to comply with the DEP and BEP Orders and must be denied. We also conclude that NECEC LLC would need to make *very substantial* changes to the Plan in order to comply with the Orders.

Highlights of our analysis include the following:

- NECEC LLC's definition of "mature forest" is not ecologically defensible and fails to meet the explicit standards of the Orders. According to the Plan, it would take 40 years for trees in this heavily harvested landscape to meet even the deficient definition of a

mature forest. Even then, in 2065, nearly all of the Plan area would be available for harvesting, and only 50% would have trees that are 50 feet or taller with a minimum basal area of 60 ft^2/acre – but the precise location of this 50% would likely be shifting over time. This approach violates the intent of the Orders to manage for mature forests and habitat, as many of the key mature forest habitat features that support wildlife will not develop under a shifting mosaic approach.

- NECEC LLC has not accurately described the current condition of the forest within the proposed 50,063 acres. According to work done by forest ecologist Dr. John Hagan using LiDAR, 78% of the land is less than 35 feet tall, not 60% as claimed by NECEC LLC, and only 7% is over 50 feet, not 13% as claimed by NECEC LLC.[1] These discrepancies matter enormously, as NECEC LLC has selected one of the most heavily harvested areas of Maine's working forest as the landscape upon which it is attempting to comply with Orders focused on conserving and managing for mature forests. In doing so, NECEC LLC's plan requires waiting until 2065 for trees to reach even 50 feet high, which is far below what we would expect in a mature forest.
- Only about 124 acres (0.2%) of the proposed 50,063 acres are considered late-successional or old-growth (LSOG) forest, with an additional 1,821 acres (3.6%) classified as transitioning late-successional forest. This is compared to 3.0% LSOG and 15.8% transitioning late-successional forest for the entire 10.4 million acres of Maine's Unorganized Territories.[2] Under the Plan, most of these mature forest areas would remain unprotected from being harvested, as only about 8 acres of LSOG and 232 acres of transitioning late-successional forest would fall within proposed 100-foot stream buffers, and there are no additional "no cut" protections outside these buffers.
- The Plan is not as contiguous and unfragmented as claimed and is vulnerable to considerable additional fragmentation in the future through loopholes in the Conservation Easement that would allow for new rights-of-way, easements of ingress or egress, driveways, roads, utility distribution or service lines, or towers. Thus, inexplicably, the Conservation Easement would allow additional fragmentation to occur even though the primary purpose of the easement is mitigation for fragmentation.
- The Plan inappropriately includes within the proposed 50,063 acres approximately 1,066 acres of habitat affected by fragmentation associated with Segment 1 of the NECEC – the same land for which the project is intended to compensate. Additionally, the Plan includes similarly fragmented habitat associated with Route 201 and an east-west transmission line, comprising 705 acres and 147 acres of the proposed conservation

[1] Our Climate Common, NECEC Conservation Plan – Opportunity for Comment (June 12, 2025)
[2] Hagan, J., Shamgochian, B., Taylor, M., and Reed, M., 2024. Using LiDAR to Map, Quantify, and Conserve Late-successional Forest in Maine. Our Climate Common Report, Georgetown, Maine. 44 pp. https://ourclimatecommon.org/wp-content/uploads/2024/10/MAINE-LSOG-Report-October-2024b.pdf

area, respectively. The Plan also includes two smaller blocks (approximately 3,900 acres combined) that do not comply with the Order's requirement that conservation blocks be 5,000 acres or larger. When both fragmented habitat and the two smaller blocks are removed, the Plan drops to 44,665 acres, which fails to meet the 50,000-acre requirement in the Orders.

- Continued forestry operations within the Plan area would be much more similar to "business as usual" than envisioned by the Orders, which include specific direction that "while conceivable that some wood could be commercially harvested within the conservation area, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not."[3] The Plan, as proposed, allows harvesting across the entirety of the 50,063 acres, except for an estimated 2,400 acres within 100-foot riparian buffers. The most likely scenario is that all trees outside these riparian buffers would be subject to harvesting after they reach 50 feet tall.
- The proposed Conservation Easement is similar to a basic working forest easement and does not adequately protect and connect riparian habitat and mature forests as required by the DEP and BEP Orders. In addition, the Plan falls short of providing the type of conservation envisioned by the Orders because it is all Conservation Easement and no fee acquisition, which would ensure a higher and more easily verified level of habitat conservation.

In more detail, we urge the DEP to deny the Plan for the following seven reasons:

Reason 1: Flawed definition of "mature forest"

In accordance with Condition #39 in the DEP Order, the primary goal of the Plan is to compensate 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." To achieve this outcome, the Order directs NECEC LLC to draft a Forest Management Plan with provisions to manage the conservation area to "provide blocks of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitat."[4]

In the Plan, NECEC LLC proposes a definition of "mature forest habitat" using thresholds of "50 feet or greater height with a basal area of 60 square feet of native tree species." NECEC LLC claims that this definition is defensible based on "ample evidence in the record to support a threshold condition of those forest stands that achieve a minimum height of 35 feet."[5]

[3] BEP Order pg. 56
[4] DEP Order pg. 81
[5] Plan pg. 4

For height, the use of 50 feet as a threshold is inadequate as mature trees of some of the most common species in the area (balsam fir, red spruce, American beech, yellow birch, and sugar maple) can reach heights ranging from 60-100 feet tall at maturity.[6]

For basal area, the use of 60 ft^2/acre as a threshold for "mature forest" is severely inadequate (see Exhibit A for a representative photo). For context, the U.S. Forest Service recommends maintaining a residual basal area of 60-80 ft^2/acre after an uneven age class harvest.[7] Additionally, Maine law defines clearcuts using a basal area of 30 ft^2/acre or less,[8] which is just half of the Plan's proposed criteria for "mature forest." In comparison, the average basal area across 547 forest plots within Maine's Ecological Reserves is 124 ft^2/acre.[9] This average includes a variety of forest types, which are known to have differing basal areas. In New England, the recommended basal area of live trees and snags for American martens is at least 80 ft^2/acre.[10] In addition to requiring a basal area of at least 80 ft^2/acre (preferably >100 ft^2/acre), marten also need an average of seven patches of forest >1,250 acres per township, each with at least 75% of the stands > 40 feet tall and 8-10 ft^2/acre of dead trees, logs, and root mounds.

In claiming that there is evidence in the record to support using 35 feet as a threshold for mature forest, NECEC LLC is mischaracterizing testimony by experts and statements by Maine DEP. To the extent that the 35-foot threshold is mentioned in the record, it is done so in reference to areas within the "wire zone," "tapered corridor," or "wildlife areas." In these cases, the 35-foot threshold is intended to either reduce habitat impacts or facilitate habitat connectivity, not to preserve mature forests. Additionally, the vegetation management requirements within the DEP Order make an explicit distinction between 35-foot minimum height and full-canopy height vegetation.[11] In this case, full-canopy height vegetation reflects a more mature forest condition, refuting the idea that 35 feet is the benchmark for mature forest established within the DEP and BEP Orders.

Since Condition #39 explicitly calls for the management of "blocks of habitat for species preferring mature forest habitat," any established definition for "mature forest" within the Plan must be grounded in an ecological context rather than an economic one. Using height and total

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[6] The Audubon Society, Field Guide to North American Trees: Eastern Region (1980)
[7] U.S. Forest Service, Silvicultural Guide for Northern Hardwoods in the Northeast (April 2014): https://www.fs.usda.gov/nrs/pubs/gtr/gtr_nrs132.pdf
[8] 12 M.R.S. §8868
[9] Kuehne, C., Puhlick, J.J., and Weiskittel, A.R., 2018. Ecological reserves in Maine: Initial results of long-term monitoring. General Technical Report. 62 p. https://www.maine.gov/dacf/mnap/reservesys/Maine%20ERM%20GTR%202018_Final.pdf
[10] High Branch Conservation Services and Plymouth State University, Guidelines for Managing American Marten Habitat in New York and Northern New England: https://rcngrants.org/sites/default/files/datasets/Compiled%20Guidelines%20for%20Managing%20Habitat%20for%20Regional%20SGCN%20in%20Norteastern%20and%20Mid-Atlantic%20Forests%20-%202017.pdf
[11] DEP Order Appendix C

basal area alone is inadequate, as measurements of height can be taken and interpreted differently depending on whether you are using the tallest trees, an average of the dominant tall trees, or LiDAR. Instead, we recommend using a combination of minimum volume, total basal area, and basal area or number of trees greater than 12-16 inches Diameter at Breast Height (DBH) to ensure that there are not only a lot of trees on the site but numerous large, old trees as well.

Reason 2: Lack of existing mature forest within the conservation area

As stated in the DEP Order, Condition #39 requires that the primary goal of the Plan be "promoting habitat connectivity and conservation of mature forest areas."[12] Condition #10 in the BEP Order updates the total amount of conservation needed to "a total of 50,000 acres."[13] Although the DEP and BEP Orders do not specify the exact method of conservation (i.e., fee acquisition vs. conservation easement), the BEP Order does state that "while commercial timber operations are not expressly precluded by the Order, typical commercial forestry operations are not conducted to achieve conservation of mature forest areas. Thus, while conceivable that some wood could be commercially harvested within the conservation area, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not."[14]

Although including a significant fee acquisition of land with a substantial amount of existing mature forest would have been the most effective approach for complying with the Orders, NECEC LLC included no fee acquisition. The entire Plan is a working forest conservation easement.

The Plan states that the proposed conservation area contains "sizeable blocks of mature forest."[15] NECEC LLC claims that "trees under 35 feet in height comprise 60% of the acreage, with only 13% currently taller than 50 feet."[16]

However, based on analysis of existing LiDAR data, the proposed conservation area contains very little mature forest. Although the Plan states that only 60% of the landscape is comprised of trees less than 35 feet in height, LiDAR data shows that 78% of the proposed conservation area is less than 35 feet in height, and 35% is less than 10 feet in height.[17,18] This difference among estimates is likely methodological. The Plan estimate likely was derived through a method of generalizing tree heights across entire stands, compared with the high-resolution

[12] DEP Order pg. 81
[13] BEP Order pg. 57
[14] BEP Order pg. 56
[15] Plan pg. 9
[16] Plan pg. 12
[17] Our Climate Common, NECEC Conservation Plan – Opportunity for Comment (June 12, 2025)
[18] Derived from 1-m^2-resolution growth-adjusted canopy height data from 2016

LiDAR data, which provides a more accurate characterization of the tree heights that are actually on the landscape. The LiDAR data reveals that the Plan area overwhelmingly is comprised of trees under 35 feet in height.

Compared to the Unorganized Territories as a whole, the proposed conservation area is one of the most heavily harvested landscapes in the last 20 years. The intensive forestry operations in the proposed conservation area are apparent in orthophotography from 2016 (see Exhibit B). Additionally, based on the LSOG dataset developed by Hagan et al. (2024),[19] only 0.2% of the proposed conservation area contains LSOG forest whereas the average across the greater Unorganized Territories in Maine is 3%. This is aligned with the fact that virtually all of the proposed conservation area is actively used for commercial forestry operations, which as the BEP Order mentions, are not conducted to achieve conservation of mature forest areas.

To achieve substantial conservation of "mature forest habitat" as defined by NECEC LLC, the Plan states that specific management practices within the Conservation Easement will be implemented to attain this "mature forest" standard for 50% of the proposed conservation area by 2065 and in perpetuity thereafter. **In other words, the Plan is proposing that half of the acreage required for compensation for ongoing habitat fragmentation impacts today will not even have trees that are 50 feet or taller until 40 years from now.**

From an ecological perspective, this lag-time in compensation is ineffective as all the species impacted by this fragmentation have lifecycles shorter than 40 years. Additionally, we believe the proposed 50% target for "mature forest" is inadequate for a compensation project whose primary goal is "promoting habitat connectivity and conservation of mature forest areas."[20] For the conservation and interconnection of this habitat type to more accurately reflect the primary goal of the Orders, a better target would be to conserve at least 75% of the non-wetland, non-high-elevation landscape in a "mature forest" condition to allow room for site variability and natural disturbances.

Reason 3: Fragmentation of the conservation area by transmission lines and roads

In accordance with Condition #39 in the DEP Order, the proposed conservation area must consist of blocks of "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."[21] The sum of these individual conservation blocks need to total at least 50,000 acres to adhere to the compensation requirement outlined in the BEP Order. According to NECEC LLC, the Plan

[19] Hagan, J., Shamgochian, B., Taylor, M., and Reed, M., 2024. Using LiDAR to Map, Quantify, and Conserve Late-successional Forest in Maine. Our Climate Common Report, Georgetown, Maine. 44 pp. https://ourclimatecommon.org/wp-content/uploads/2024/10/MAINE-LSOG-Report-October-2024b.pdf

[20] DEP Order pg. 81

[21] DEP Order pg. 81

"greatly exceeds this requirement by conserving one largely contiguous block of approximately 50,063 acres, which itself is surrounded by already conserved land."[22]

Although NECEC LLC claims that the proposed conservation area is one "largely contiguous" block, a closer evaluation of the Plan reveals that it contains several fragmenting features that greatly reduce habitat connectivity. Most prominently, these include the NECEC line itself, Route 201, and a smaller east-west transmission line. When these three features are taken into consideration, the proposed conservation area is more accurately represented as six separate blocks rather than one contiguous area (see Exhibit C). Of these six blocks, two are smaller than 5,000 acres, even when adjacent conservation land is taken into consideration. NECEC has not provided any justification that would demonstrate that "conservation of any smaller block" (such as these two) should qualify for inclusion in the Plan based on "location or other characteristics." [23] Thus, these two smaller blocks, which total more than 3,900 acres, should be removed from the Plan for non-compliance with the Orders – bringing the overall acreage below the 50,000-acre requirement.

Using the same edge effect width for calculating fragmentation impacts from the NECEC line in the DEP Order (i.e., 330 feet on each side of the corridor), the total impact of these three fragmenting features (e.g., the NECEC Line, Rt. 201, and a smaller existing transmission line) can be calculated within the proposed conservation area (see Exhibit D). For the corridor itself, the amount of land within the Plan that will experience fragmentation impacts is approximately 1,066 acres, based on approximate boundaries of the proposed conservation area and the assumption that 150 feet on either side of the NECEC centerline is not included in the Conservation Easement. For Route 201 and the east-west transmission line, the fragmentation impact is approximately 705 acres and 147 acres, respectively. Accounting for overlap, the total habitat fragmentation impact of all three of these features within the proposed conservation area is approximately 1,909 acres. Due to fragmentation impacts, this total should be subtracted from the proposed 50,063 acres of mitigation, which would again result in the Plan falling short of the required 50,000 acres of conservation.

<u>Removing non-compliant small blocks and fragmented habitat areas that should not be allowed as compensation for the NECEC's fragmentation impacts within the compliant large blocks brings the Plan area to approximately 44,665 acres, which fails to meet the minimum requirement of 50,000 acres.</u>

[22] Plan pg. 8
[23] DEP Order pg. 81

Reason 4: Inadequate forest management practices for maintaining mature forest habitat and connecting riparian habitat with mature forest

As part of Condition #39, the DEP Order requires that the Plan include a draft Forest Management Plan with specific provisions to manage the conservation area to "provide blocks of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitat."[24] To that end, the Plan proposes to manage land within the conservation area so that 50% of the 50,000 acres meets the NECEC LLC definition of "mature forest" by the year 2065 and that this 50% threshold be maintained in perpetuity through a "shifting mosaic" forest management strategy.

From an ecological perspective, the problem with this approach is that much of the 50-foot tall, 60 ft^2/acre basal area "mature forest" will move across the landscape over time. This means that no one area will necessarily be maintained and managed as a "mature forest" in the long term, greatly reducing and disrupting the vast variety of habitat features and benefits that accompany unmanaged mature forests. These features and benefits emerge and are sustained when there are at least three layers of vegetation composed of trees varying in age and size, dominant trees with DBH values above 12-16 inches (with many greater than 16 inches), large downed logs, large standing dead trees, pit-and-mound microtopography, and a well-developed leaf litter layer.

In addition, according to the Plan's proposal, roughly 28% of the mature forest would be concentrated in the 0-100-foot riparian buffer and 100-330-foot riparian filter areas with only a few large patches of mature forest in the uplands. These mature forests in the uplands are necessary to support many of Maine's interior forest nesting songbirds and the American marten, contrary to NECEC LLC's suggestion that forests in riparian areas will do so.

Furthermore, under the current provisions outlined in the Plan, extensive harvesting will still be allowed within the 100-330-foot riparian filter areas so long as this harvesting maintains NECEC LLC's definition of "mature forest." This harvesting, even if done within the confines of their "mature forest" definition, would greatly reduce the habitat connectivity benefits of these areas.

Other problems with the proposed forest management practices within the Plan include the following:

- The details within the Forest Management Plan really matter, as this is where the interpretation of the Conservation Easement requirements gets put into play. However, **at this time, NECEC LLC has provided the DEP with only a table of contents for the Forest Management Plan, despite the explicit requirement in the Order that a Forest**

[24] DEP Order pg. 81

Management Plan be submitted and approved by the DEP before the transmission line can be operational.

- The Conservation Easement allows for the creation of new plantations on 4,000 acres (8%) of the proposed conservation area in addition to the maintenance of existing plantations. The location and total acreage of existing plantations within the area are not provided, although language within the Conservation Easement allows for existing plantations to be classified as "mature forest." Plantation forestry provides very few benefits to wildlife, especially when compared to naturally regenerated areas.
- There are no constraints on pre-commercial thinning within the mature forests in the Plan area, which could result in a landscape with trees that reach 50 feet high but have little of the understory that can be critical for habitat.
- There are no specific limitations on herbicide use outlined in the Plan. Certain herbicides commonly used in forestry are known to impact habitat preferred by snowshoe hares and Canada lynx, both of which are common in the proposed conservation area.
- There are no established safeguards or parameters around salvage harvests in response to future infestations or diseases (e.g., spruce budworm). Spruce budworm insecticides not only kill spruce budworm caterpillars, but all caterpillars exposed to the insecticide. These caterpillars are the primary food source for most of our breeding forest birds and their young, especially three warblers (Cape May, Bay-breasted, and Tennessee) that are considered budworm specialists.

Reason 5: Insufficient protection of riparian areas

To offset habitat fragmentation impacts, Condition #39 in the DEP Order requires that the proposed conservation area be managed to provide "wildlife travel corridors along riparian areas."[25] The Plan proposes to accomplish this through a "100-foot no-harvest buffer around perennial streams beginning at the normal high-water line (totaling approximately 2,400 acres), and perpetual management as mature forest habitat from 100 feet to 330 feet from the normal high-water line (totaling approximately 4,500 additional acres)."[26]

While the 100-foot no-harvest buffer around all perennial streams will provide substantial habitat benefits, including protecting water quality, facilitating wildlife travel, and enabling the development of truly mature forests, the Plan's proposed approach has shortcomings. One deficiency is that NECEC LLC proposes to measure the 100-foot no-harvest buffer from the normal high-water line of the stream channel. Instead, these buffers should be measured from the edge of the associated floodplain or connected wetland to better facilitate habitat protection and wildlife travel. Additionally, the protection provided by these no-harvest buffers

[25] DEP Order pg. 81
[26] Plan pg. 16

should extend to intermittent streams, which are often the source of important cold water and nutrient inputs for downstream waters and cold-water fisheries. In addition, the data source for mapping these perennial streams should be provided and their locations should be ground-truthed, as there are many perennial streams in Maine that do not appear in mapped datasets (see Exhibit E for a map of known perennial streams in the proposed conservation area). Also, the 100-foot to 330-foot riparian filter area with 50-foot-tall trees at 60 ft^2/acre of basal area has limited value for other riparian habitat species that need more mature, closed canopy forests for feeding, nesting, denning, cover from predators, and moving between the riparian areas and other mature forest areas.

Furthermore, the Plan does not outline adequate measures to protect wildlife travel within aquatic habitats. For example, **the Plan does not limit new stream crossings nor require any new or replacement crossings to follow Stream Smart standards outlined in the Maine Forest Service's Best Management Practices for Forestry.**[27]

Reason 6: Failure to include any fee acquisition as part of the Plan

As outlined above, Condition #10 in the BEP Order requires that NECEC LLC conserve "a total of 50,000 acres" to compensate for the fragmenting effect of the transmission line.[28] Although the DEP and BEP Orders do not specify the exact method of conservation (i.e., fee acquisition, conservation easement, or a combination of both), the BEP Order does state that "while, as noted above, commercial timber operations are not expressly precluded, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan." [29]

Given this language and considering the heavily harvested current condition of the landscape, as well as the limitations of the proposed Plan and Conservation Easement, we believe that **it will be essential for NECEC LLC to include a significant amount of fee acquisition in its Plan in order to comply with the Orders.** This is the case because it is highly unlikely that Weyerhaeuser (or a successor commercial landowner) will be able to meet the Orders' requirements for conserving and connecting ecologically mature forest and riparian habitats over time due to other commercial goals and constraints.

The Plan could and should be improved by conserving existing LSOG and transitioning late-successional forest stands in the Plan area through no-cut zones around such areas (including substantial buffers) within the Conservation Easement provisions. This would help ensure that close to 2,000 acres of such stands would become and be managed in perpetuity as mature

[27] Maine Forest Service and Maine Department of Agriculture, Conservation & Forestry, 2017. "Best Management Practices for Forestry: Protecting Maine's Water Quality - Third Edition". Forest Service Documents. 53 pp. https://digitalmaine.com/for_docs/53

[28] BEP Order pg. 57

[29] BEP Order pg. 56

forest. However, such changes would not be sufficient to meet the intent of the DEP and BEP Orders to protect mature forest, as they would constitute only a tiny fraction of the landscape.

Reason 7: Flawed Conservation Easement provisions that allow habitat fragmentation

As outlined above, Condition #39 in the DEP Order requires NECEC LLC to develop a Forest Management Plan that "provide[s] blocks of habitat for species preferring mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitat."[30] The Forest Management Plan is the integral component to how the land within the Conservation Easement would be managed to meet the requirements outlined in the DEP and BEP Orders.

However, the working forest Conservation Easement outlined in the Plan does not protect the ecological values outlined in the Order. Specifically, the Conservation Easement falls short of the requirement to promote habitat connectivity, for the following reasons:

- A lack of restrictions on new logging roads and skid trails, particularly in riparian areas.
- Allowance of commercial sale of gravel, sand, and rock to any third party.
- Allowance for water extraction.
- Allowance for new rights-of-way, easements of ingress or egress, driveways, roads, utility distribution or service lines, towers, or other easements.
- A lack of sufficient monitoring and enforcement of provisions within the easement, with one example being that holder approval is not needed for subsequent 10-year updates to the Forest Management Plan.

Additionally, in terms of natural resource protection, the Conservation Easement outlined in the Plan falls short of other recent working forest easements in Maine that require minimum stocking levels; have stronger riparian habitat management and road crossing standards; include special management areas for high-value, rare, and endangered species, and/or LSOG forest areas; and/or define ecological reserves that are off-limits to harvesting.

Recommendations

For the reasons outlined above, **we request Maine DEP deny the Plan as presented**. Upon close examination, it is clear that the Plan presented by NECEC LLC fails to comply with the high standards for conserving habitat connectivity and managing for mature forests set forth in Condition #39 of the DEP Order and Condition #10 of the BEP Order. For a Conservation Plan to meet the intent and specifics of the DEP and BEP Orders, NECEC LLC must submit a revised Plan, for further DEP review, that includes the following:

1. A definition of "mature forest" based on sound ecological principles. If using height and basal area as benchmarks, more accurate thresholds for "mature forest" would be a

[30] DEP Order pg. 81

canopy height of at least 75 feet and a basal area of at least 110 ft^2/acre. However, as outlined above, our recommendation for a more comprehensive ecological definition of "mature forest" using commonly measured forestry metrics would include a combination of minimum volume (cords/acre), total basal area (ft^2/acre), and basal area or number of trees within specific DBH classes ranging from 12-16 inches (ft^2/acre or total number). The specific "mature forest" criteria for these three metrics should vary by forest type (e.g., northern hardwood, mixed wood, and spruce-fir), and specific percentages of the landscape meeting these requirements explicitly stated. In the context of the DEP and BEP Orders, appropriate "mature forest" thresholds for these metrics would be a minimum volume of 25-40 cords/acre, total basal area of 80-120 ft^2/acre, and a basal area of trees ≥ 12 inches DBH of 40-60 ft^2/acre (depending on forest type) on 55% of the landscape and ≥ 16 inches DBH of 40 ft^2/acre on another 20% of the landscape, together covering 75% of the landscape.

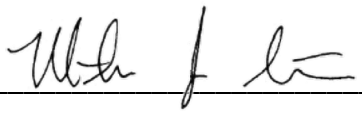
2. A shorter timeframe than 40 years for achieving a majority "mature forest" state within the conservation area. To align with the timeframe of impacts, the desired "mature forest" habitat benefits of the project should be more immediate. Given the current condition of the forest inside the proposed conservation area, this outcome can only be achieved by acquiring and permanently conserving land outside of this area that is already in or closer to a mature forest condition. We believe that at least 15,000 to 20,000 acres of fee acquisition of such lands will be required to comply with the Orders.
3. No additional fragmentation of the proposed conservation area by transmission corridors or paved roads.
4. A larger percentage of the conservation area to be managed in perpetuity as ecologically mature forest, without shifting mature forest across the landscape. In the current Plan, only the 100-foot buffers around perennial streams provide this permanent ecologically mature forest protection. To better achieve the goal of conserving existing mature forest habitat, additional no-cut areas could be established surrounding existing LSOG and transitioning late-successional forest stands within the proposed conservation area.
5. Stronger riparian protections, including extended no-cut buffers around intermittent streams, expanded mature forest buffers around all streams, Stream Smart crossings, and improved connections between riparian habitat and other mature forest areas.
6. More appropriate ownership and management of mature forest and riparian-connected mitigation lands to meet the requirements of the DEP and BEP Orders, such as by the Bureau of Parks and Lands (BPL).
7. The removal of specific provisions within the Conservation Easement that would allow habitat fragmentation and degrade existing natural resources through the allowance of new rights of way, roads, distribution or service lines, commercial sale of gravel, etc.

To conclude, we believe that NECEC LLC's proposed Conservation Plan and Conservation Easement clearly and broadly fail to meet the spirit, intent, and specifics of the requirements outlined in the DEP and BEP Orders and must be denied. The Plan provides almost no protection for the small amount of transitioning late-successional, late-successional, and old-growth forest stands within the Plan Area; it proposes waiting 40 years for 50% of the area to reach a definition of "mature forest" that is not ecologically defensible; and even then – in 2065 and beyond – the portion of the Plan area that is "mature" would be constantly shifting – which cannot be what the DEP and BEP envisioned in requiring that 50,000 acres of land in the vicinity of Segment 1 be managed in large blocks of habitat for species that prefer mature forest habitat—the compensation requirement for the impacts of the project on wildlife and wildlife habitat.

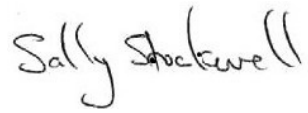
To meet these Orders, compensation for the loss of mature forest and habitat fragmentation should be in the form of the permanent protection of comparable high-value habitat, not just the conservation of commercially managed forest lands using a working forest conservation easement and a proposed definition of "mature forest" that is not defensible on ecological grounds.

To achieve the compensation purposes set out by the Orders, we urge the Maine DEP to deny the proposed Plan and require NECEC LLC to submit a revised version that meets the standards set forth in Condition #39 of the DEP Order and Condition #10 of the BEP Order. While we recognize that NECEC LLC seeks to commission the NECEC project near the end of 2025, we observe that the company has had more than five years to develop this Conservation Plan since the DEP Order (May 11, 2020) and more than three years since the BEP Order (July 21, 2022). Any timing challenges that NECEC LLC may now face could have been avoided if the company had devoted more attention to this permit requirement over the past few years and submitted a proposed Conservation Plan in 2023 or 2024, rather than waiting until May 9, 2025.

Sincerely,



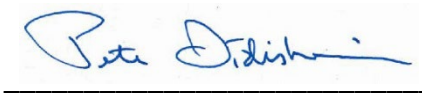
Matt Streeter
Chair,
Maine Council of Trout Unlimited



Sally Stockwell
Director of Conservation,
Maine Audubon



Eliza Townsend
Maine Conservation Policy Director,
Appalachian Mountain Club



Pete Didisheim
Senior Director of Advocacy,
Natural Resources Council of Maine

Exhibit A:

Representative Basal Area Photographs



Forest stand with a residual basal area of approximately 60 ft^2/acre after a recent harvest.[31] **Under NECEC LLC's definition, this stand would be considered a "mature forest" if the trees are 50 feet high.**



Representative photo of a northern hardwood forest in Maine's Duck Lake Ecological Reserve.[32] Of the 26 forest plots that were remeasured at Duck Lake, the average basal area was 135 ft^2/acre.[33]

[31] U.S. Forest Service, Silvicultural Guide for Northern Hardwoods in the Northeast (April 2014): https://www.fs.usda.gov/nrs/pubs/gtr/gtr_nrs132.pdf

[32] Maine Natural Areas Program, Duck Lake: https://www.maine.gov/dacf/mnap/reservesys/ducklake.htm

[33] Kuehne C., Puhlick J.J., and Weiskittel A.R., 2018. Ecological reserves in Maine: Initial results of long-term monitoring. General Technical Report. 62 p. https://www.maine.gov/dacf/mnap/reservesys/Maine%20ERM%20GTR%202018_Final.pdf

Exhibit B:

2016 Aerial Photography of the Proposed Conservation Area

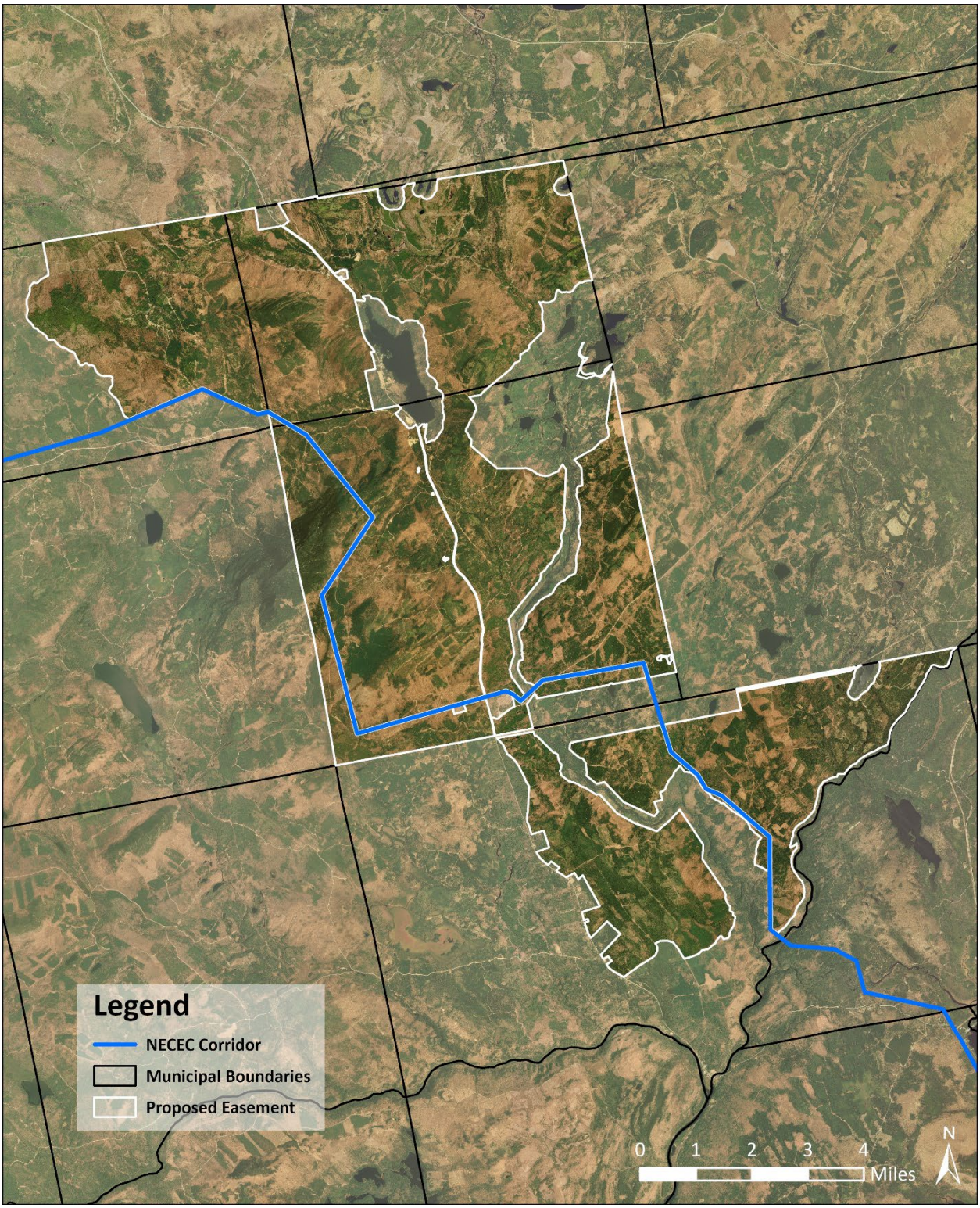


Exhibit C:

Map of the Six Blocks Within the Proposed Conservation Area and Adjacent Conservation Land

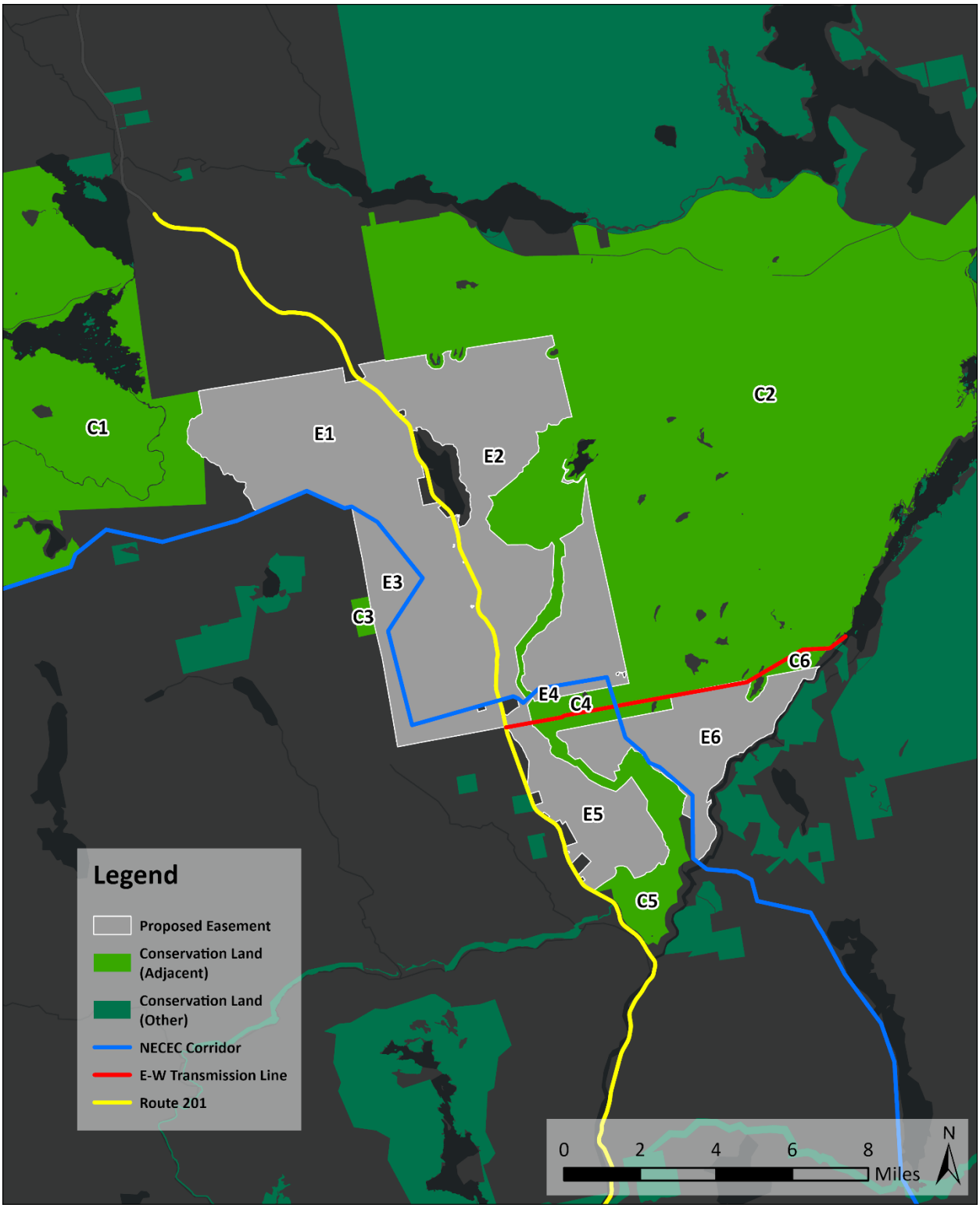


Table C-1. Estimated acreages of the six blocks within the proposed conservation area and adjacent conservation land, with total block areas less than 5,000 acres highlighted in red.

Block Name	Easement Area (acres)	Adj. Conservation Name	Adj. Conservation Area (acres)	Total Block Area (acres)
E1	18,021	C1	>58,000	>76,021
E2	16,803	C2	>85,000	>101,803
E3	3,392	C3	301	**3,693**
E4	514	C4	737	**1,251**
E5	6,185	C5	4,063	10,248
E6	5,348	C6	723	6,071

Exhibit D:

Map of Fragmented Habitat Within the Proposed Conservation Area

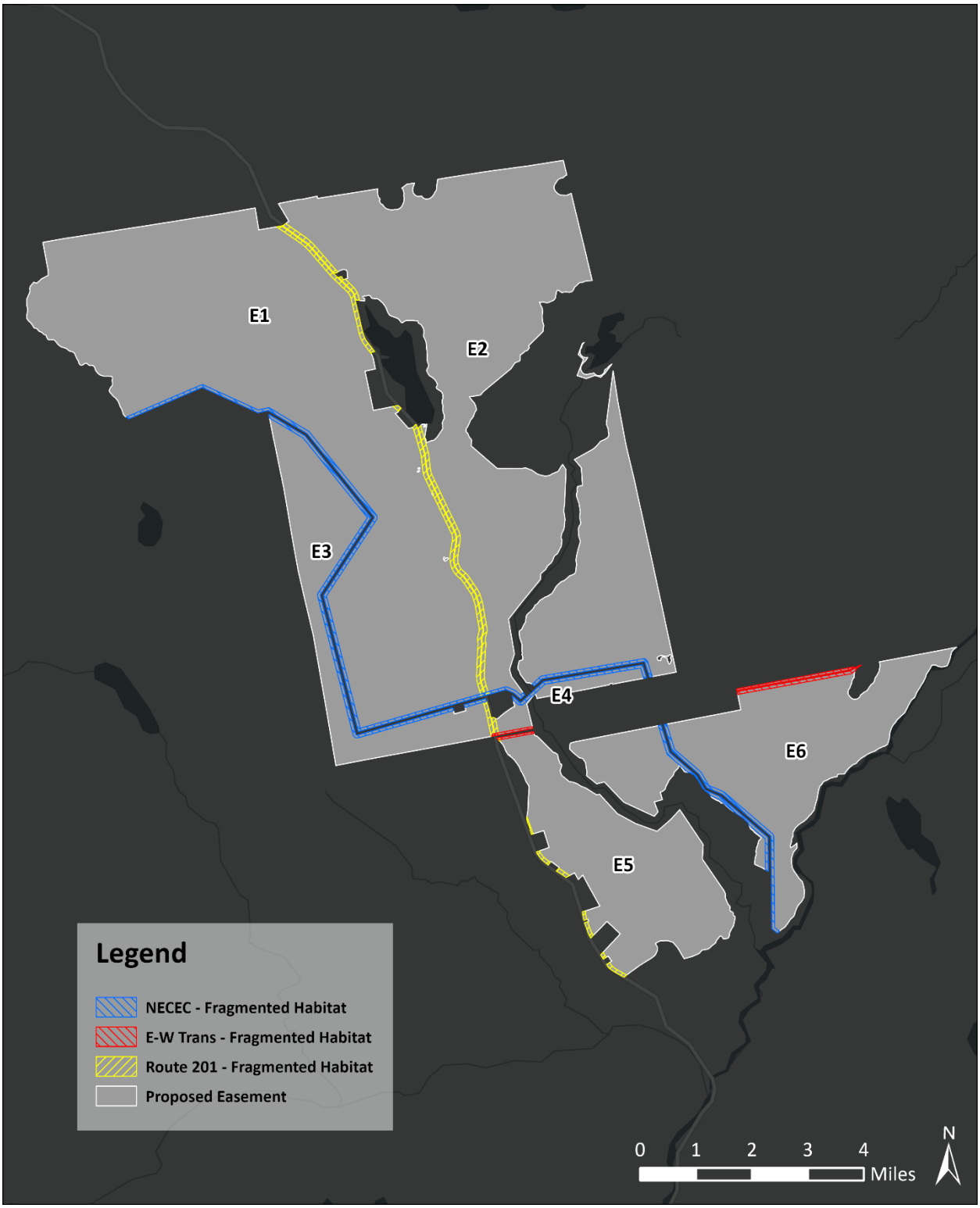
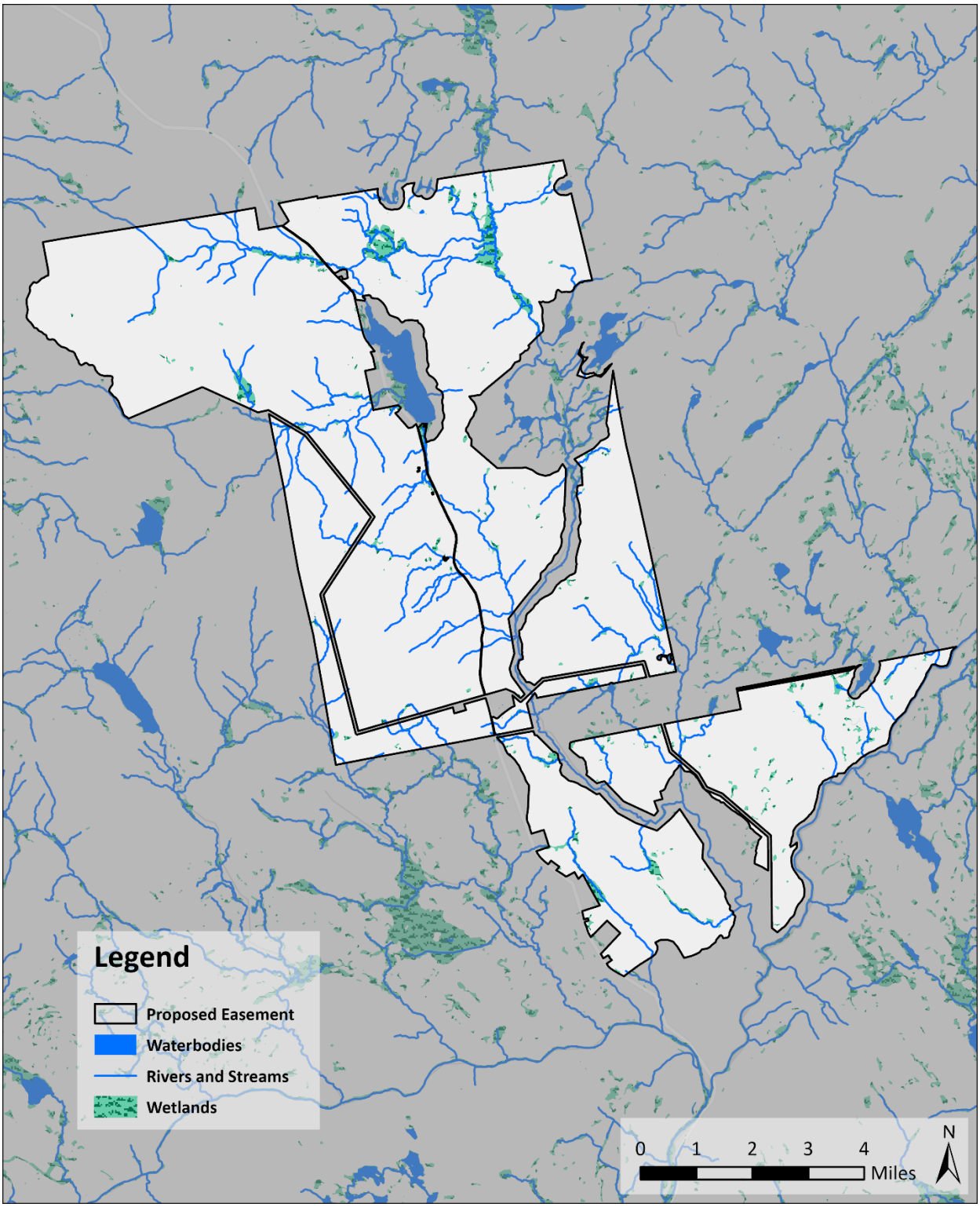


Table D-1. Estimated acreages of fragmented habitat and associated 10:1 compensation within the proposed conservation area.

Block Name	Easement Area	NECEC Frag.	E-W Trans. Frag.	Rt 201 Frag.	Rt 201 Overlap	Total Frag.	Compensation (10:1)	Unfragmented Easement Area
	(acres)							
E1	18,021	370		327	2	695	6,950	17,326
E2	16,803	98	44	279	2	419	4,194	16,383
E3	3,392	280	1	26	3	304	3,044	3,088
E4	514	84	16	13	2	112	1,116	402
E5	6,185	91	14	60	1	164	1,642	6,021
E6	5,348	143	71			214	2,139	5,134
Totals	**50,263**	**1,066**	**147**	**705**	**9**	**1,909**	**19,086**	**48,354**

Exhibit E:

Map of Perennial Streams and Wetlands Within the Proposed Conservation Area[34]



[34] Data from the National Hydrography Dataset (NHD) and the National Wetlands Inventory (NWI)

EXHIBIT F

October 24, 2025

Dawn Hallowell
Director, Southern Maine Regional Office
Maine Department of Environmental Protection
312 Canco Road
Portland, ME 04103

RE: NECEC Conservation Plan – Follow-Up Comments

Dear Ms. Hallowell,

We appreciate the opportunity to provide additional public comments on the New England Clean Energy Connect (NECEC) Conservation Plan ("Plan") submitted by NECEC Transmission LLC ("NECEC") to the Maine Department of Environmental Protection (DEP) on May 9, 2025. The purpose of the Plan is to comply with Condition #39 of the May 11, 2020, Maine DEP Order ("DEP Order") and Condition #10 of the July 21, 2022, Maine Board of Environmental Protection (BEP) Order ("BEP Order"). These two conditions require NECEC to conserve at least 50,000 acres in the vicinity of Segment 1 of the NECEC project, subject to certain requirements. These Orders specify the type of parcels allowed to qualify for the Plan and they place a strong emphasis on mature forests and conservation of habitat for species that prefer mature forests.

Since the time when our groups submitted joint comments on July 12, 2025 ("Joint Comments"), NECEC has submitted a required Forest Management Plan (FMP) and two minor amendments to the Plan. NECEC reportedly is developing an updated FMP that it has shared with the Bureau of Parks and Lands (BPL), but our organizations have not yet received a copy for review and comment.

- On August 1, 2025, NECEC submitted a "response to the public comments" that included a few small changes in a redline version of the Conservation Easement.
- On October 7, 2025, NECEC submitted a redline version of the Conservation Easement with a revised "Mature Forest" definition, which NECEC described as its response to an October 3, 2025, communication from the DEP which stated that "NECEC must clarify or increase the basal area that will constitute mature forest conditions."

We believe that the minor adjustments that NECEC has made to the Plan since July 2025 fail to meet the requirements established by the DEP and BEP. As such, our assessment of the Plan remains unchanged since our June 12, 2025, comments, namely:

> "After careful review of NECEC LLC's submission, we conclude that the Plan fails to comply with the DEP and BEP Orders and must be denied."[1]

Joint comments submitted on June 13, 2025, by The Nature Conservancy in Maine and Conservation Law Foundation ("TNC and CLF Comments"), reached a similar conclusion: "our organizations conclude that this revised plan is not sufficient to meet the terms of the Maine Department of Environmental Protection (DEP) and Board of Environmental Protection (BEP) Orders."[2]

The two sets of joint comments from nonprofit organizations submitted in June shared the common theme that the Plan did not include sufficient conservation elements to comply with the BEP and DEP Orders. The six conservation organizations were unified in concluding that **NECEC must alter its definition of mature forest and supplement its Plan with additional ecologically significant parcels that contain a greater amount of mature forest.**

This addition of land outside the Plan area is necessary because the lands selected by NECEC for the Plan do not currently contain enough older and taller trees, and their associated habitat types, to comply with the core requirement to conserve mature forest areas. Additional acreage is also necessary to meet the explicit requirement to conserve at least 50,000 acres, which we believe is not currently satisfied because two parcels that are less than 5,000 acres each fail to comply with requirements in the Orders. Simply changing the definition of "mature forest," as NECEC did in its October 7, 2025, revision, does not change the fact that the Plan area is largely devoid of mature forest.

The NECEC Conservation Plan fails to meet the requirements of the DEP and BEP orders for multiple reasons and should therefore be denied.

1. <u>Two Smaller Parcels Should be Disqualified</u>

The most prominent and clear requirement of the DEP and BEP Orders is that NECEC must conserve "a total of 50,000 acres."[3] This acreage must consist of blocks of "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."[4]

NECEC has not met this acreage requirement in accordance with the requirements in the Orders. Specifically, as noted in our June 12, 2025, comments, the Plan includes six blocks – four

[1] Joint Comments pg. 1
[2] TNC and CLF Comments pg. 1
[3] BEP Order pg. 57
[4] DEP Order pg. 81

of which meet the 5,000-acre block requirement, and two of which (E3 and E4) do not meet the requirement. (See Appendix A, reprinted from Appendix C of the Joint Comments).

Although NECEC characterizes the proposed 50,000-acre conservation area as a "largely contiguous block,"[5] the conservation area is divided up into six separate blocks by three distinct fragmenting features.[6] These fragmenting features include the NECEC line itself, Route 201, and an existing east-west transmission line.

These fragmenting features must be considered when determining the boundaries of habitat blocks that can qualify for the Plan, since these types of features cause multiple impacts on habitat. Such impacts are well documented in the scientific literature, testimony as part of the proceedings on the DEP Order, and in the DEP and BEP Orders. One example is testimony by Dr. David Publicover, Senior Staff Scientist and Acting Director of Research with the Appalachian Mountain Club, on behalf of Intervenor Group 4 in the NECEC proceeding. Citing information in the Land Use Planning Commission's 2010 Comprehensive Land Use Plan, Dr. Publicover said:

> "'Scientists have identified fragmentation of habitat as a serious concern. Roads, utility corridors, certain types of recreation trails, structures and clearings create breaks in the landscape. These breaks can act as barriers to animals and isolate populations of both plants and animals.' Maintaining connectivity was one of three 'super themes' guiding wildlife conservation actions identified in the 2015 Wildlife Action Plan."[7]

The Orders clearly require that blocks less than 5,000 acres be "adjacent" for the purpose of ensuring that parcels contribute toward the goal of compensating "for the impacts of the project on wildlife habitat, including habitat fragmentation."[8] In this context—where the imposition of the condition was intended to *mitigate* the negative impacts of the NECEC line as a new fragmenting feature—the proper understanding of "adjacent" must mean that any proposed parcel of less than 5,000 acres must share a common border with other conservation lands to create unfragmented blocks that are larger than 5,000 acres so as to mitigate, rather than contribute to, the adverse impacts on wildlife caused by fragmenting features.

Two smaller blocks in the Plan fall below the 5,000-acre requirement even after existing adjacent conserved land is considered (Table 1). The block west of both the NECEC line and Route 201 (E3) is approximately 3,392 acres with only 301 acres of adjacent conservation land, amounting to a total acreage of 3,693 acres. The block in the center of the proposed conservation area (E4) that is surrounded on all sides by the three fragmenting features is

[5] Plan pg. 8
[6] Joint Comments pg. 16
[7] Pre-filed Testimony of Dr. David Publicover, Appalachian Mountain Club, February 22, 2019, pg. 12. Additional studies and references on the fragmentation impacts of roads and transmission for wildlife and habitat are included in Appendix B.
[8] BEP Order pg. 57

approximately 514 acres with only 737 acres of adjacent conservation land, amounting to a total acreage of 1,251 acres.[9]

Based on our review of all Plan-related materials submitted by NECEC, we do not believe that NECEC has in any way demonstrated that these two smaller blocks are "uniquely appropriate to further the goals of the Conservation Plan,"[10] which is the criteria in the Orders that must be met in order for blocks smaller than 5,000 acres to qualify. These two areas are very similar to the surrounding industrial forest landscape and are therefore not unique in the conservation benefits they provide.

Table 1. Estimated acreages of the six blocks within the proposed conservation area and adjacent conservation land, with total block areas less than 5,000 acres highlighted in red.

Block Name	Easement Area (acres)	Adj. Conservation Name	Adj. Conservation Area (acres)	Total Block Area (acres)
E1	18,021	C1	>58,000	>76,021
E2	16,803	C2	>85,000	>101,803
E3	**3,392**	C3	301	**3,693**
E4	**514**	C4	737	**1,251**
E5	6,185	C5	4,063	10,248
E6	5,348	C6	723	6,071

Because they fail to meet the 5,000-acre individual block requirement, these two areas should be disqualified from consideration as part of the total acreage, which means that **the entire Plan falls short of the 50,000-acre overall requirement.**

This shortfall alone provides sufficient grounds for DEP to deny the NECEC Conservation Plan since it clearly fails to meet the most unambiguous requirement of the DEP and BEP Orders.

2. Failure to Meet Mature Forest Conditions

The DEP also has ample grounds for denying the Plan because NECEC has failed to provide a sufficient response to the Department's request that "NECEC must clarify or increase the basal area that will constitute mature forest conditions" (Emphasis added).[11] NECEC should have responded by *applying* the definition recommended by the Department in a manner that meets the requirements of the Orders, not just adopting the definition without otherwise changing an inadequately protective plan. Specifically, as described below, NECEC should have responded with a revised Plan that protects the small amount of existing older forests within the Plan area and NECEC should have committed to provide, through fee acquisition, additional acreage

[9] Joint Comments pg. 17
[10] DEP Order pg. 81
[11] October 3, 2025, communication from the DEP to NECEC

outside of the Plan area that contains existing older forests that would be allowed to grow to full maturity.

DEP's October 3, 2025, directive to NECEC clearly recognized that the 50,000 acres in the Plan area contains a very small amount of existing mature forest. Based on the use of LiDAR, a highly accurate technology for classifying forest stands, ecologist Dr. John Hagan concluded in his June 12, 2025, comments to the record ("Hagan Comments") that 95.8% of the Plan area is not late-successional and old-growth (LSOG) forest or transitioning late-successional forest.[12] The tree canopy in 78% of the area is less than 35 feet tall, with 35% of the canopy less than 10 feet tall, and only 7% of the area comprised of trees greater than 50 feet tall.[13] These calculations are based on classifying "every square meter in a stand,"[14] providing a highly accurate assessment of the Plan area.

Based on the LiDAR analysis, Dr. Hagan concludes: **"The proposed easement area has been one of the most intensively harvested areas of the unorganized township area of Maine in the last 20+ years."** (emphasis added).[15]

The current condition of the forest within the Plan area is what it is—the absence of existing mature forest cannot be remedied simply by altering a definition. By any objective measure, the current condition of the Plan area will require a lengthy timeframe—many decades—to become anything close to a mature forest. This is acknowledged by the FMP's proposed approach of trying to meet the requirements of the DEP and BEP Orders by managing the landscape toward a goal that 50% of the trees would be "mature" (using a deeply flawed definition) in the year 2065 – 40 years from now.[16]

The fragmenting impacts of the NECEC line have already begun and will continue to occur each coming year, yet the Plan requests that the regulatory bodies that provided a permit with strong conditions imposed to mitigate these adverse impacts wait 40 years for the forest in the Plan area to reach a condition that they implausibly describe a being "mature." Even in 2065, the condition of the forest would still fall far short of providing true mitigation through support of species that prefer and depend on mature forest.

Because NECEC chose these particular 50,000 acres, in the condition that they are in, which appears in part to have been a least-cost and profit maximization strategy, it had little choice but to put forth a definition of "mature forest" that was not supportable based on science. As stated by Dr. Hagan:

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[12] Hagan Comments pg. 3
[13] Hagan Comments pg. 3
[14] Hagan Comments pg. 6
[15] Hagan Comments pg. 4
[16] FMP pg. 16

> "the 'mature forest' definition proposed in the Conservation Plan does not pass an ecological straight-face test. If 60 ft^2/acre of basal area with some trees at least 50 ft tall is the criterion Weyerhaeuser is willing to meet, then call it 'partially-cut mid-age forest.' It is simply not 'mature forest.'"[17]

Dr. Hagan further stated that based on his field experience, "mature forest would have a basal area of at least 120 ft^2/acre and trees at least 60 ft tall."[18]

Given the current condition of the forest in the Plan area, NECEC should have responded to the Department's request to "clarify or increase the basal area" by ensuring the protection of existing high-basal area forests. Rather than just changing words in a definition, as NECEC did, it could have amended the Conservation Easement and FMP to, at a minimum, establish a moratorium on cutting all or most of the existing LSOG within the Plan area (which is approximately 124 acres) and some of the approximately 1,821 acres classified as transitioning late-successional forest.

This response would at least address a purpose of the conservation conditions imposed by the Orders by helping to ensure that the few remaining older and larger trees that presently exist within the Plan area could not, literally, be cut down tomorrow, which is the reality under the current Plan—even as the Plan purports to be responsive to the requirement of protecting "mature forest."

But to actually bring this Plan into compliance with the Orders, NECEC should have responded to the Department by committing to secure, at a minimum, 10,000 acres of additional land through fee acquisition outside of the Plan area that contains a higher level of basal area per acre—including a significant portion at larger diameters, so that the starting point for this Plan would come closer to the expectation of a mature forest that also would clearly comply with the BEP Order's requirement that:

> "While… commercial timber operations are not expressly precluded, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan."[19]

In the joint comments submitted by our organizations, we recommended that NECEC be required to secure, through fee easement, 15,000 to 20,000 acres of forest that is already in or closer to a mature forest condition.

The Nature Conservancy in Maine and Conservation Law Foundation concluded, in their joint comments, that the "Conservation Easement should not be viewed as meeting the terms of the

[17] Hagan Comments pg. 1
[18] Hagan Comments pg. 1
[19] BEP Order pg. 57

order on a 1:1 acreage basis. Additional acreage should be included in the Conservation Plan."[20] Specifically, TNC and CLF concluded that the Plan should include significant additional acreage of ecologically significant forest that is adjacent to existing conservation lands and that "contain extensive mature forest now and that would have opportunity to develop into late successional/old growth forest under conservation management."[21] **The Department should Order NECEC to secure, at a minimum, 10,000 acres of forest with larger and older trees; otherwise it should find that the proposed Plan does not satisfy the condition it purports to address.**

3. Failure to Provide Conservation Management Designed for Older Forests

Because NECEC effectively declined the Department's invitation to bring its proposed Plan into compliance with the conditions required by the Orders, its condition compliance application must be denied. NECEC could have responded to the DEP's October 3, 2025, communication not only by making changes that would protect the small amount of remaining LSOG in the Plan area, but also by securing through fee acquisition at least an additional 10,000 acres of forest with a higher volume of trees. It could also have ensured that those additional acres be managed through a conservation easement held by a land trust or Bureau of Parks and Lands that allows trees to grow to full maturity. The NECEC Conservation Easement falls far short of what is needed to allow trees to become and remain mature forest.

NECEC asserts that it has developed an "unprecedented conservation management" plan, a claim that it attempts to prop up with an unsubstantiated and inaccurate comment in the public record stating that the Plan "achieves conservation management to a standard previously unseen on private lands in Maine."[22] This is simply not true.

As demonstrated in Appendix C, the State of Maine and multiple land trusts manage conservation easements with much stronger provisions for the conservation of mature forests than what is proposed by NECEC. Other than within protected riparian areas, the Plan allows all trees within the plan area to be cut through a "shifting mosaic" management approach that categorically does not incorporate the ecological value of allowing a significant portion of the trees to remain uncut and grow old—potentially hundreds of years old—and to connect those riparian areas with other areas of upland mature forest.

To meet such an objective, which would have been responsive to the requirement in the DEP Order to conserve "mature forest habitat and wildlife travel corridors along riparian areas and between mature forest habitats,"[23] NECEC could have looked no further than conservation

[20] TNC and CLF Comments pg. 4
[21] TNC and CLF Comments pg. 6
[22] NECEC, August 1, 2025, pg. 10, quoting comments by R. Anderson
[23] DEP Order pg. 81.

easements that currently protect tens of thousands of acres in Maine, on private land, with provisions that allow trees to grow old, including the following: (note – this is only a subset; see Appendix C):

- Fourth Machias Lake Ecological Reserve
- No. 5 Mountain Preserve
- Leuthold Forest Reserve Addition (#6 Mountain)
- Grafton Forest Wilderness Preserve
- Alder Stream
- Debsconeag Lakes Wilderness Area
- Amazon-Musquash Reserve and Special Management Area

In sum, NECEC had many options that it could have pursued to respond to the DEP's request to "clarify or increase the basal area that will constitute mature forest conditions" in the Plan. The options outlined above would have ensured the protection of high-basal area forests within the existing Plan area. If the addition of at least 10,000 acres of fee acquisition were placed under the management of a nonprofit land trust or BPL with a conservation easement designed to allow much of that land to grow to full maturity, then NECEC could plausibly have claimed that the Plan meets the DEP and BEP's requirements for the project. **Absent such changes, we believe that the DEP must conclude that the Plan is in non-compliance and must be modified further.**

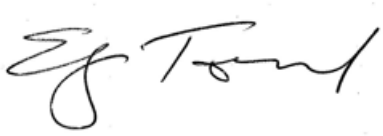
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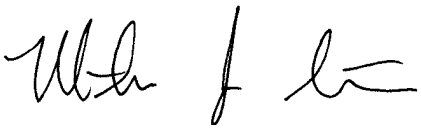
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Appalachian Mountain Club



Matt Streeter
Chair
Maine Council of Trout Unlimited

Appendix A – Map of the Six Blocks Within the Proposed Conservation Area and Adjacent Conservation Land (see link below)

Appendix B – Documentation of Fragmentation Impacts Caused by Roads and Transmission Lines (see link below)

Appendix C – Examples of Conservation Easements that Allow Forests to Grow to Maturity (see link below)

Due to the large file sizes, the appendices are being submitted via a shared OneDrive folder where they can be accessed and downloaded. This folder will be active for 90 days.

EXHIBIT G

November 12, 2025

Dawn Hallowell
Director, Southern Maine Regional Office
Maine Department of Environmental Protection
312 Canco Road
Portland, ME 04103

RE: Comments –Draft Department Order for NECEC Conservation Plan

Dear Ms. Hallowell,

We appreciate the opportunity to provide comments on the draft Department Order released by the Maine Department of Environmental Protection (DEP) on November 4, 2025 ("Draft Order"), granting conditional approval of the New England Clean Energy Connect (NECEC) Conservation Plan ("Plan"). For the Plan to be approved, it must comply with Condition #39 of the May 11, 2020, Maine DEP Order ("DEP Order") and Condition #10 of the July 21, 2022, Maine Board of Environmental Protection (BEP) Order ("BEP Order"). The Plan was submitted by NECEC Transmission LLC ("NECEC") on May 9, 2025, with the accompanying Forest Management Plan (FMP) submitted on July 16, 2025. Since that time, two minor amendments to the Plan have been made and a revised FMP was submitted by NECEC on October 24, 2025.

Consistent with the written comments submitted by our organizations on June 12, 2025 ("Joint Comments"), and October 24, 2025 ("Follow-Up Comments"), **we strongly believe that the Plan, including with the minor changes required by the Draft Order, fails to comply with the DEP and BEP Orders. We disagree with the DEP's findings and believe that the record does not support approval of the Plan. As such, we urge the DEP to deny the application.**

At a fundamental level, the Department effectively removes the requirements related to mature forest areas by failing to grapple with the reality, described by one of the state's leading forest ecologists, Dr. John Hagan, that "The proposed easement area has been one of the most intensively harvested areas of the unorganized township area of Maine in the last 20+ years." [1]

NECEC's choice of a heavily harvested area for its Plan put the Department in the difficult position of trying to reconcile the condition of the forest in these 50,000 acres with the requirement that NECEC provide a mitigation plan that has "as its primary goal the compensation for the fragmenting effect of the transmission line on habitat in the region of

[1] Hagan Comments, June 12, 2025, pg. 4

Segment 1 and the related edge effect by promoting habitat connectivity and conservation of mature forest areas." (emphasis added).

Dr. Hagan's June 12, 2025, comments provided a very clear analysis of both the existing condition of forest in the 50,000-acre Conservation Plan area, and what constitutes scientifically grounded definitions of age classes in Maine.

In terms of the forest condition of the Plan area, based on the use of LiDAR, a highly accurate technology for classifying forest stands, Dr. Hagan determined that the tree canopy in 78% of the area is less than 35 feet tall, with 35% of the canopy less than 10 feet tall, and **only 7% of the area comprised of trees greater than 50 feet tall."**[2] (emphasis added)

In terms of a definition of "mature forest," Dr. Hagan stated: "Based on my field experience, mature forest would have a basal area of at least 120 ft^2/acre and trees at least 60 ft tall."[3] Hagan supported this definition with the following chart, showing both basal area and tree height that constitutes the different age-classes of forest in Maine's unorganized territories.[4]

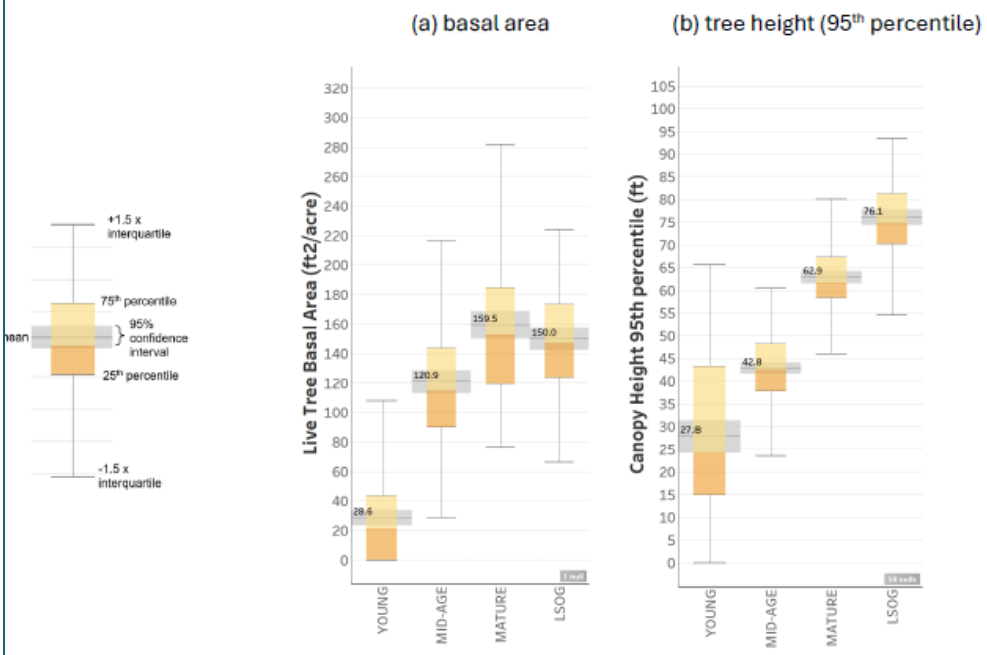
[2] Hagan Comments, June 12, 2025, pg. 3. These calculations were based on classifying "every square meter in a stand," providing a highly accurate assessment of the Plan area, using approximately 206,500,000 data points. Hagan stated that his analysis "errs toward an overestimate of current height" because the data did not include harvest areas over the past decade "which would result in a reduction in height."

[3] Hagan Comments, June 12, 2025, pg.1

[4] Note that the mean for mature forest is closer to 160 ft^2 of basal area and 64 ft tall, with many more sites having basal areas up to 180+ ft^2 of basal area and 67 ft tall.

Figure 1. From Hagan June 12, 2025, Comments

Figure 1. Basal area (a) and tree heights (b) of different age-classes of forest, based on our studies of birds and LSOG forest in the unorganized townships of Maine, 2021-2024. [1,2] Canopy heights are based on highly accurate LiDAR data. (n=463 plots)



[1] Levy, F.S., Reed, J.M., McKinley, P.S., Gunn, J.S., Anderson, K. and Hagan, J.M., 2025. Increased bird abundances over 30 years in an extensive commercial forest landscape. Biological Conservation, 302, p.110934.

[2] Hagan, J., B. Shamgochian, M. Taylor, and M. Reed. 2024. Using LiDAR to Map, Quantify, and Conserve Late-successional Forest in Maine. Our Climate Common Report, Georgetown, Maine. 44 pp. (Link)

These data put a fine point on the challenge facing DEP in evaluating the Conservation Plan and the actual forest that NECEC proposed for mitigation: How can NECEC meet the licensing requirement to conserve mature forest within a landscape that has very little mature forest? The Department's answer should be: it can't. Instead, the Draft Order engages in interpretive gymnastics that effectively remove the mature forest conservation requirements.

Illustrating this point further, Figure 2 shows images from the Plan area that are representative of areas that NECEC claims are currently "mature forest" under NECEC's definition of the term, and areas that would be counted as "mature forest" in 2065. Figure 3 shows representative examples of ecologically mature forests, including one within the plan area itself, for comparison. Additional images, as well as a map showing the locations where photos within the Plan area were taken, can be found in Appendix A.



Figure 2. Representative photographs of forest stands within the Plan area that are (a) currently within the ≥ 50 feet forest height group and (b) projected to be within the ≥ 50 feet forest height group by 2065 according to NECEC's FMP *(photos by the Natural Resources Council of Maine and Maine Audubon*).



Figure 3. Representative photographs of ecologically mature, late-successional softwood forest stands (a) within the Plan area and (b) outside of the Plan area in Maine (*photos by the Natural Resources Council of Maine, Maine Audubon, and Our Climate Common*).[5]

[5] In his June 12, 2025 comments, Dr. Hagan called on DEP to consider "including a moratorium on harvesting any remaining LSOG forest that lies within the Plan area." This only amounts to about 124 acres (0.2%) of late successional forest and old growth forest, or 0.2% of the 50,063 acres in the Plan area. DEP has not made this requirement NECEC, although it would seem to be a logical starting point toward meeting the mature forest conservation requirement. These remaining older stands in the Plan area seem destined to all be cut, except those within riparian zones. Dr. Hagan's October 31, 2025 comments state that "25% of the existing LSOG forest in the easement area today" will be cut by 2037, according to his review of the harvest plans included in the Forest Management Plan. This analysis demonstrates that older trees will systematically be harvested within the Plan area, unless DEP requires otherwise, and regardless of the requirement in the Orders to manage for mature forests.

NECEC has attempted to avoid meeting its mature forest conservation challenge through several avoidance strategies, none of which pass muster. First, NECEC created their own definition of "mature forest habitat" as being forests with "50 feet or greater height with a basal area of 60 square feet of native tree species."[6] Even the Department's sister agencies (some of whom were involved in the negotiations with NECEC over the definition) all stated that the definition proposed for this project should not have any precedential value in any other proceeding that required mature forest—that alone should demonstrate that NECEC was trying to avoid the plain meaning of the mature forest requirements. Unsurprisingly, this definition received widespread rebuke from Maine experts who study mature forests and members of the public who submitted comments for the record.[7]

As an example, Dr. Hagan, commented that "the 'mature forest' definition proposed in the Conservation Plan **does not pass an ecological straight-face test.** If 60 ft^2/acre of basal area with some trees at least 50 ft. tall is the criterion Weyerhaeuser is willing to meet, then call it 'partially-cut mid-age forest.' It is simply not 'mature forest.'"[8] (emphasis added.)

Similarly, Molly Docherty, Director of the Maine Natural Areas Program (MNAP), responded to NECEC's implausible mature forest definition by stating: "The definition put forward in the Conservation Plan is not technically in line with the MNAP's scientific basis for mature forest,"[9] adding that it "does not reflect working definitions used by the U.S. Forest Service, the Society of American Foresters and others (e.g. USFWS)."[10]

NECEC has also attempted to avoid compliance with the mature forest conservation requirement by choosing a landscape mostly devoid of mature forest and then asserting that compliance <u>not be required for more than 40 years.</u> This is an audacious and unprecedented proposal that asks regulators to accept impacts now and wait decades for mitigation.

Although the fragmenting impacts of the NECEC line have already begun and will continue to occur each coming year, the Plan requests that the regulatory bodies that provided a permit with strong conditions imposed to mitigate these adverse impacts wait 40 years of fragmentation impacts caused by the NECEC project before the forest in the Plan area reaches a condition that NECEC asserts is "mature" but that will still not be considered an ecologically mature forest.[11]

NECEC's strategy of avoidance through delayed compliance is presented with the following chart in its October 24, 2025 Revised Forest Management Plan (Figure 4).

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[6] NECEC Conservation Plan, May 9, 2025
[7] https://www.maine.gov/dep/ftp/projects/necec/Conservation%20Plan%20Condition%20Compliance/comments/
[8] Hagan Comments, June 12, 2025, pg. 1
[9] MNAP Comments, June 12, 2025
[10] MNAP Comments, June 12, 2025
[11] Final Forest Management Plan, October 24, 2025, pg.16

Figure 4. NECEC Forest Management Plan Estimated Schedule for Mature Forest Habitat

Figure 2. Mature Forest Milestones - Estimated Mature Habitat at each 10-year increment o
Productive Acres

Mature Forest Milestones	
2025	13%
2035	20%
2045	30%
2055	40%
2065	50%

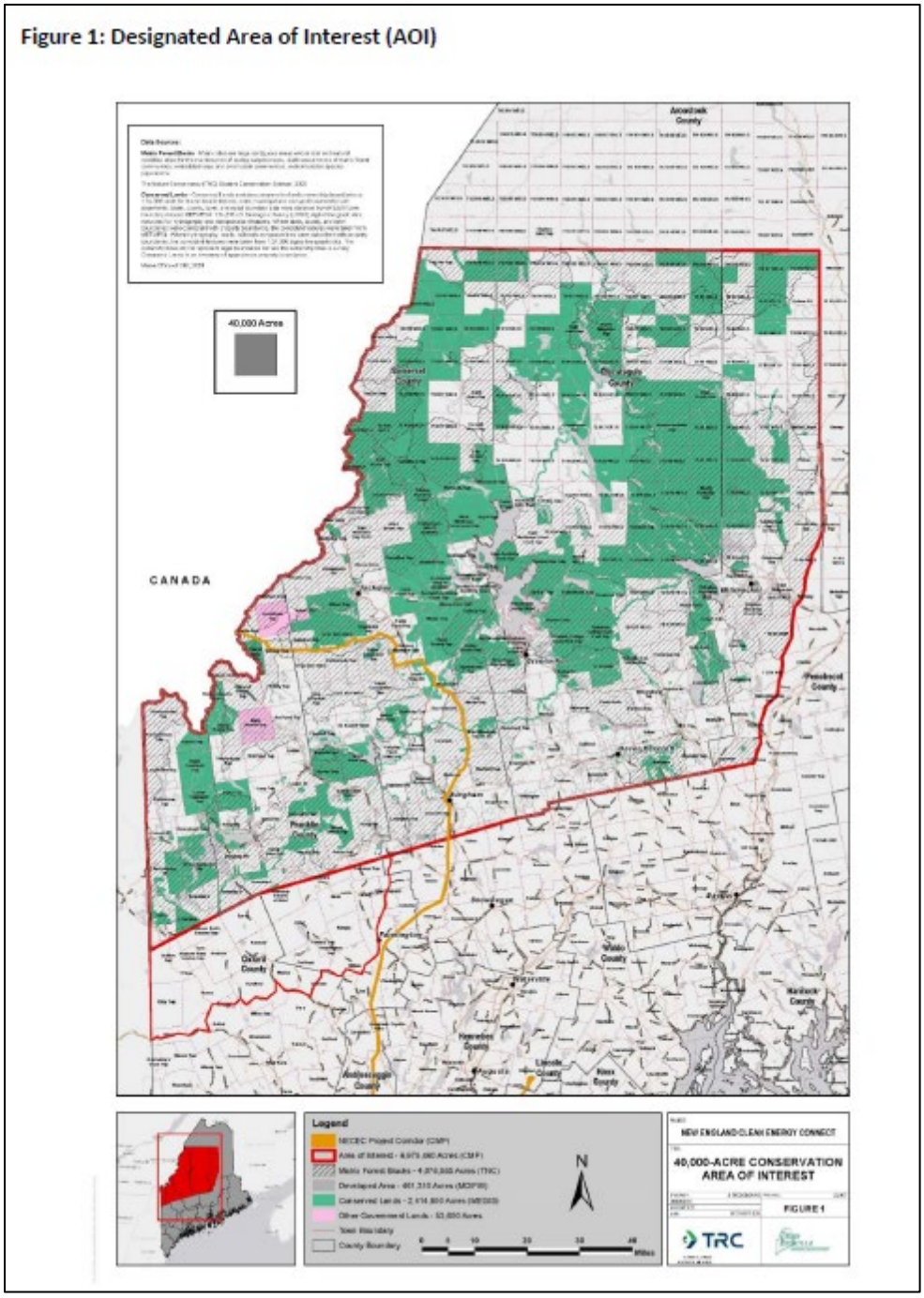
[**Note:** This same chart appears in both the first and second drafts of the Forest Management Plan, despite changing the definition of mature forest from *60 ft^2 of basal area of 50' tall trees* to *80 ft^2 of basal area of live trees, with 60 ft^2 of basal area of 50' tall trees.* Note the first definition does not include all live trees, just those 50' or taller, which demonstrates that these two definitions are not meaningfully different when put into practice on the ground. Thus, the Department should deny approval even with the new definition for the same reason that it could not approve it using the old definition: regardless of the definition used there is no mature forest being conserved.]

Finally, NECEC also attempts to use non-compliant, under-sized forest blocks that suffer from the fragmenting effects of the NECEC itself by creating the false impression that regulators will essentially only allow mitigation in a sharply limited geographic area that is adjacent to the transmission corridor.[12] Being adjacent to the NECEC is not a "unique attribute" of a forest block that should qualify it for an exception to the clear minimum size requirements imposed by the BEP and DEP Orders. One need only look at how NECEC has changed its language about the Conservation Plan requirement over the past four years to understand this strategy. The Department should reject this sleight-of-hand and require NECEC to find compliant forest blocks, even if they are farther from the corridor.

On November 12, 2021, NECEC submitted an initial Conservation Plan for meeting the mature forest mitigation requirement that included a description of an Area of Interest (AOI) that was "comprised of approximately 6,978,490 acres in the vicinity of Segment 1 of the NECEC."[13] This AOI was identified as being the area where "NECEC LLC has communicated with numerous landowners and easement holders during the habitat block selection process."[14] NECEC's 2021 Conservation Plan included the map of the AOI (Figure 5).

[12] See Joint Comments in June and October, which describe the two non-compliant small blocks that fail to meet the requirements in the order and should be disqualified from consideration. Removal of these two blocks reduces the Plan to less than the required 50,000 acres, which is grounds for a Plan denial.
[13] NECEC Conservation Compliance Submission, November 12, 2021. pg. 2
[14] NECEC Conservation Compliance Submission, November 12, 2021. pg. 6

Figure 5. Designated Area of Interest for Conservation from NECEC 2021 Conservation Plan



This large area where NECEC reportedly was exploring large block conservation options with landowners and easement holders includes many areas that could meet the requirements in the Orders. The map in Appendix B shows age classifications of forests within NECEC's AOI, revealing that there were many areas and landowners that NECEC could potentially have worked with to meet the mature forest conservation requirements in the Orders.

As proof of that point, Appendix C lists many highly significant conservation projects completed since 2021, or in process, involving landowners and easement holders that have worked together to conserve tens of thousands of acres within the NECEC's 2021 AOI region. Most of these projects include areas of forest that could meet an ecologically supportable definition of mature forest. NECEC had the opportunity to work with these (and likely other) partners to advance such conservation projects as part of a Conservation Plan that would have met the compliance requirements. But even though conversations were underway between NECEC and various landowners, the company focused on 50,000 acres of highly cutover land owned by Weyerhaeuser and has worked to create the impression that this is the only game in town.

In pursuing this avoidance strategy, NECEC, between 2021 and 2025, sharply narrowed its definition of the area of interest to being essentially only an area that is bisected by the NECEC line itself. References to the AOI disappeared, and "in the vicinity" was used instead. In describing its Conservation Plan area in this way, NECEC is artificially constraining the landscape where it claims that a compliant Plan can be established. This is not to say that a 50,000-acre conservation easement that connects with the Moosehead Region Conservation Easement does not provide value. It does, as would any 50,000-acre easement in the Unorganized Territories. But providing value is not the same as compliance with the Orders.

The NECEC's approach demonstrates a cynical motive: to create the false impression that the proposed project is the only game in town. This approach is intended to box in the Department to accept NECEC's other two contrivances: a scientifically indefensible definition of "mature forest," and a multi-decade timeline for compliance. The response should be clear: the DEP should reject these contrivances and deny approval of the Conservation Plan.

Instead, the DEP draft approval seems to accept this constrained geographic area for the project, along with its implications of adjusted expectations regarding the definition of mature forest (for a landscape without much mature forest) and an extended schedule for compliance that requires waiting many decades for the very young existing forest to grow up to a mid-aged forest.

It is important to note that the DEP order states that the primary goal of mature forest conservation must be achieved "in the region of Segment 1" of the NECEC, and the BEP Order describes the requirement for "compensating for the fragmenting effect of the transmission line on habitat in the region of Segment 1" (emphasis added). NECEC's 2021 Condition Compliance Plan clearly recognized this larger landscape region as its appropriate area of interest, stating:

> "As required by the Order, the primary goal of the Conservation Plan is compensation for the fragmenting effect of the transmission line on habitat in the region of Segment 1 and the related edge effect."[15] (emphasis added)

There is no evidence in the record that the DEP established a new definition of "in the region" for the purpose of directing the NECEC to sharply reduce the allowable area for meeting its mitigation requirement to land that must be immediately adjacent to the NECEC transmission line. However, NECEC seems to have decided to change the terminology from "in the region" to "in the vicinity" to reinforce its proposition that the Plan must be located near the transmission line. The October 7, 2025, Final Condition Compliance Submission removes references to "in the region" entirely and only refers, multiple times, to "in the vicinity."[16]

In the comments submitted by our organizations in June and October 2025, we urged the Department to deny the NECEC Conservation Plan for multiple reasons, including: NECEC's flawed definition of mature forest, the lack of mature forest within the conservation area, the shifting nature of the mature forest, the lack of connectivity between the riparian habitat and other mature forest in the conservation area, fragmentation of the conservation area by transmission lines and roads, inadequate forest management practices in the Forest Management Plan, and the inclusion in the Plan of two small parcels that fail to meet the 5,000-acre minimum requirement for the size of conservation blocks.[17] We stand firm in our position that each of these deficiencies, and others, provides the DEP with ample basis for denying the application.

Regretfully, DEP has not issued a draft denial of the NECEC Plan. Rather, it has issued a draft approval that relies heavily on the applicant's sleight-of-hand interpretations of how to interpret the conditions of the Order in a manner that delays critical mitigation requirements during four decades of ongoing impacts, and never actually achieves mature forest conservation.

This approach dismisses serious concerns about the Plan's non-compliance raised by other commenters and results in a forced fit of the Plan's 50,000-acre landscape into the firm mature forest and habitat connectivity conservation requirements of the Orders. The DEP should defend the original conditions; it should reverse course from the Draft Order and deny the application.

The Draft Order contains several material misinterpretations of the original permit conditions.

First, with regard to the NECEC's flawed definition of a "mature forest," the DEP did not require NECEC to adopt a definition that would be, as Dr. Hagan recommended, "ecologically credible

[15] NECEC Conservation Compliance Submission, November 12, 2021, pg.2
[16] NECEC Conservation Compliance Submission, October 7, 2025.
[17] Joint Comments filed June 12, 2025 and October 24, 2025

with the broader scientific community."[18] Rather, the DEP simply directed the NECEC to increase the definition of mature forest from a basal area of 60 square feet per acre to 80 square feet per acre, with minor additional adjustments. This is a far cry from Dr. Hagan's definition of mature forest as having basal area of at least 120 ft^2/acre and trees at least 60 ft tall"[19] and ignores the plain meaning of the term "mature forest" as described by other licensed foresters.

For example, Robert Bryan notes the proposed definition of mature forest reflects" pole" or "mid-aged stands" that are "far from mature." Forestry Professor Robert Seymour notes that growing trees to 50' tall over 40 years is not a particularly rigorous benchmark, but that to keep a large area at least 50' tall will require the trees to be much higher than that before being sustainably harvested, yet the Forest Management Plan does not emphasize this. And TNC and CLF note that" the shifting mosaic approach and 50% acreage requirement do not guarantee 'large blocks' of mature forest. As Seymour notes, ownership by BPL would be a better outcome, meaning BPL would be more likely to manage the land to meet the ecological benchmarks of the Order than would an industrial landowner.[20]

In its Draft Order, the Department then justifies ignoring an ecologically defensible definition of mature forest by suggesting that its definition "would satisfy pine marten habitat requirements in most cases,"[21] and claiming that pine marten is an "umbrella" species. But the Department then distances itself from the precedent of using pine marten as a surrogate for mitigation requirements in the future, stating that "future regulators are not obligated to focus on pine marten habitat."[22] But then it goes on to assert that, for the purposes of compliance for this project, "the Department finds that habitat conditions suitable for pine marten are appropriately considered 'mature forest' habitat conditions."[23]

There is no way around the reality that the NECEC is a heavily scrutinized project that will have precedential effect. The Department's concerns are well founded: it is bad precedent to use pine martin habitat as a substitute for a defensible definition of mature forest. The Department

[18] Hagan Comments, June 12, 2025, pg. 7

[19] We note for the record that the DEP Draft Order fails categorically to address the concerns, information, and recommendations presented by Dr. Hagan, one of the State's leading experts on mature forests. Dr. Hagan identified himself as a proponent of the NECEC and a forest ecologist who has studied commercial forestry in Maine over the past three decades, working in partnership with commercial landowners, including Weyerhaeuser. Despite Dr. Hagan's expertise, the DEP devoted the vast majority of analysis in the Draft Order to comments submitted by our organizations. DEP seems to have taken its direction, in this regard, from NECEC, which did not mention Dr. Hagan's comments even once in its August 1, 2025, Response to Public Comments, pretending that Dr. Hagan's strong critiques of the Plan did not exist. We believe that the selective omission of Dr. Hagan's comments was intentional and designed to support the goal of lowering hurdles to the path to a Plan approval.

[20] ttps://www.maine.gov/dep/ftp/projects/necec/Conservation%20Plan%20Condition%20Compliance/comments/

[21] DEP Draft Order, pg. 9

[22] DEP Draft Order, pg. 9

[23] DEP Draft Order, pg. 9

is kidding itself (and the public) if it thinks that disclaiming future precedential effect is sufficient. The way to avoid this bad precedent is simple: don't set it.

In other words, the Department is kidding itself when it asserts that for the purposes of compliance for this project – and only this project – it can define "mature forest habitat" in a way that future regulators can ignore. The attempt appears aimed at responding to worries expressed by MNAP in its June 2025 comments that "the definition of mature forest used in the Plan not be used as a precedent for working forest easements." [24] It also is responsive to the DIFW's comment that "if 50 feet [tree height] is approved, it should be clear that 50 feet applies to this Plan only and should not be considered a precedent for future mitigation parcels requiring mature forests."[25] BPL also requested distance from the Plan's definition, stating: "The mature forest definition used here should not be considered a precedent in other regulatory proceedings requiring mature forest."[26]

In light of these concerns from other state agencies, it should be worrying for the public that the DEP is proposing an interpretation of a definition for a critical compliance requirement for the NECEC and then explaining that this interpretation can be otherwise ignored by future regulators. We are not aware of any other permitting decision that has used such language. The NECEC is a precedential project. The DEP's decision—including on the Conservation Plan—should set a precedent that the State is proud of. It should not set a precedent that the State knows will come back to haunt it in the future—and the Department is stretching credulity if it thinks that its disclaimer language can have that effect.

Moreover, the "pine marten test" as a basis for compliance with the Orders fails anyway because the permit requires conservation of "blocks of habitat for species preferring mature forest habitat" (emphasis added). This is plural, not singular, and the record has extensive testimony about the broad range of species that require mature forest habitat, including species that depend on conditions that are not coincident with those preferred by pine marten.

Some of the species that depend on mature forest include red-shouldered hawk; black-throated blue warbler; Canada warbler; ovenbird and wood thrush; wood frogs; spotted salamanders; eastern red-backed salamanders; spotted salamanders; many woodland raptors, mosses, and lichens; and more. These species have a broad range of habitat needs that cannot be boiled down to the minimum requirements of a single species that also prefers mature forest, even if that species is an "umbrella species." Additional studies highlighting some of the habitat requirements for these species can be found in Appendix D.

[24] MNAP Comments, pg.2
[25] MDIFW Comments
[26] BPL Comments, June 13, 2025, pg. 2

Additionally, some of the species listed above are considered Species of Greatest Conservation Need in Maine, and many of them will not adapt to the "shifting mosaic" management strategy that DEP seems prepared to accept as being compliant with "mature forest conservation." The only way to protect the habitat for these species is by providing blocks of ecologically mature forest that are allowed to remain in this mature state over time.

NECEC's Plan states that the land within the conservation area would be managed so that 50% of the 50,000 acres meets the NECEC's definition of "mature forest" by the year 2065 and that this 50% threshold be maintained in perpetuity through a "shifting mosaic" forest management strategy.

From an ecological perspective, the problem with this approach is that much of the so-called "mature forest" will shift locations within the landscape over time, even though species that require mature forest conditions cannot all be expected to readily figure out where new patches of trees greater than 50 feet can be found.

This is another fundamental incompatibility of the NECEC Conservation Plan with the permit requirements. In requiring NECEC to conserve "blocks of habitat for species preferring mature forest habitat," the DEP and BEP could not have meant that the species of concern would need to regularly be on the move to find these blocks of habitat. Yet that, in effect, is what the DEP Draft Order implies.

With a "shifting mosaic" management approach, no specific area (other than in riparian zones) will be maintained and managed as "mature forests" over the long term, which means that the variety of habitat features and benefits that accompany ecologically defensible mature forests will be constantly disrupted,[27] and this means that species that become established in an older stand of trees will face the risk of radical habitat change when the area is harvested, yet – despite these glaring problems – the DEP's Draft Order erroneously concludes that the Plan meets the requirements of the Orders.

Another interpretive error by the DEP to reach its draft approval of the Plan comes in terms of the multi-decade timeline for compliance. Put frankly, the fact that state regulators and the people of Maine should be required to wait at least 40 years while fragmentation impacts occur on the ground before half of the NECEC Plan Area meets an inadequate definition of what constitutes a "mature forest" – when habitat connectivity and conservation of "mature forest"

[27] These features include at least three layers of vegetation composed of trees varying in age and size, dominant trees with DBH values ranging from 12-16 inches (with many greater than 16 inches), large downed logs, large standing dead trees, pit-and-mound microtopography, and a well-developed leaf litter layer.

are the primary goals of the conservation plan – should be grounds in-and-of-itself for denial of the Plan.[28]

But that is not what DEP has done. Instead, DEP attempts to justify this lengthy wait for NECEC's required mature forest mitigation by comparing it to the state's wetland mitigation programs, specifically:

> "While the proposed CE allows 40 years to achieve the 50% Mature Forest Goal, this approach is consistent with compensatory mitigation programs for wetland impacts that allow wetland restoration projects to be implemented over a period of years after the impact is permitted. The Department finds that compensation for the NECEC project's habitat connectivity impacts will be provided in an appropriate timeframe."[29]

This comparison does not hold water, literally. According to the Maine Natural Resources Conservation Program's 2023 Annual Report, "90 to 95% of permitted projects with wetlands impacts that trigger state or federal compensation thresholds in Maine currently compensate those impacts through the ILF (In Lieu Fee) Program,"[30] which involves payment of fees in lieu of the permittee providing on-site or off-site mitigation for impacted wetlands. In the MNRCP report, there is no evidence that in lieu fees are held for decades before they are utilized for mitigation. To the contrary, the report states: "While the program does not require that all permitted impacts be compensated on a strict, one-to-one basis each year, overall program debits and credits are carefully tracked to ensure the timely and effective compensation of functions and values that have been lost."[31] Funds are awarded on an annual basis for protection, enhancement, and restoration projects, and projects usually take from 1-3 years to be completed, with monitoring of restoration projects required for 3-7 years.

Finally, we Departments errs when it finds that the Conservation Easement represents an improvement compared with standard sustainable forestry operations commonly allowed in areas subject to working forest easements, using the Moosehead Region Conservation Easement as its easement for comparison purposes. This basic working forest easement was finalized in 2009 and does not include the ecological features provided by more recent working forest easements, such as the Kennebago Conservation Easement and accompanying in the Rangeley region. This easement serves as better comparison, given the BEP and DEP Orders'

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[28] We note that the discrepancy between the NECEC assessment of the condition of the forest, and Dr. Hagan's conclusion could be highly consequential in determining whether NECEC can meet the 50% milestone in 2065. Weyerhaeuser won't be doing an updated inventory until the end of 2026 (according to the October 24, 2025 FMP, pg.30 . What might this mean if Dr. Hagan's LiDAR analysis proves correct, that the starting point of the forest is 7% (or less) that is 50 ft height today, rather than 13% as claimed in the Forest Management Plan? DEP has failed to address this possibility through its selective attention to information in the record.

[29] Draft Order, p.10

[30] Maine Natural Resource Conservation Program, 2023 Annual Report, pg. 1. https://www.maine.gov/dep/land/nrpa/ILF_and_NRCP/MNRCP/MNRCP_16thAnnualReport_2023_Final.pdf

[31] MNRCP Report, pg. 10.

focus on forest management that is not at the level "commonly allowed." Measured against this example, the forest practices allowed by the NECEC easement look very similar to simply business as usual. (see Appendix E).

Summary

Despite the many ways that the NECEC Conservation Plan fails to comply with the Orders, our organizations have not suggested that NECEC scrap its plan and start elsewhere. We recognize that the proposed 50,000-acre easement has value, we just don't believe that it complies with the Orders.

That is why we urge the Department to reverse its Draft Decision of Approval, and instead issue a Denial, with a requirement that NECEC secure, at a minimum, an additional 10,000 acres of forest with larger and older trees, and to place that land under the management of a nonprofit land trust or BPL with a conservation easement and ecological management plan designed to allow much of that land to grow to and be maintained at full maturity. Additionally, the Department should require higher thresholds for the definition of mature forest that are grounded in ecology, and that state agencies and future regulators don't have to dismiss as having been part of a mature forest definition tailored to the needs of one project application.

As noted in our June and October comments, we believe the DEP should require the establishment of additional no-cut areas or more strict harvesting limitations in and around the little remaining ecologically mature forest within the proposed conservation area. An example of a working forest easement and associated multi-resource management plan that better achieves the goal of conserving ecologically mature forest can be found in Appendix E.

In identifying at least 10,000 acres of forest to augment the Plan, NECEC can and should consider other lands held by Weyerhaeuser that have a higher level of standing timber. But NECEC should also consider looking elsewhere within the nearly seven-million-acre AOI that was identified in the 2021 NECEC Conservation Plan.

What should matter to the DEP is that NECEC presents a Conservation Plan that unequivocally meets the permit requirements of promoting habitat connectivity and conserving mature forest areas. The current Plan does not meet this test, no matter how hard NECEC tries to force fit its plan into the Orders, and regardless of DEP's attempt to justify this precedential decision, while trying to claim that it shouldn't be considered a precedent.

We urge the Department to deny the Plan so that NECEC brings forward an improved Plan that can earn approval on its merits, rather than the current Plan that falls short of compliance with the Orders in so many ways.

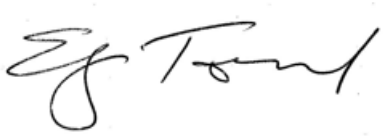
Sincerely,



Pete Didisheim
Senior Director of Advocacy
Natural Resources Council of Maine



Sally Stockwell
Director of Conservation
Maine Audubon



Eliza Townsend
Maine Conservation Policy Director
Appalachian Mountain Club

Appendix A– Representative Photographs Within the Conservation Area and Representative Photographs of Ecologically Mature Forest Outside the Conservation Area

Appendix B – Map of NECEC's Forest Types & Successional Stages Data from the 2021 Conservation Plan With the Proposed 50,000 Conservation Area from the 2025 Plan Overlaid

Appendix C – List of Recent Significant Conservation Projects in Western Maine with Associated News Articles

Appendix D – Scientific Articles of Habitat Requirements for Species Referenced in the Record Other Than Pine Marten That Prefer Mature Forest

Appendix E – Example Working Forest Conservation Easement and Multi-Resource Management Plan with Provisions to Protect Mature Forest

Due to the large file sizes, the appendices are being submitted via a shared OneDrive folder where they can be accessed and downloaded. This folder will be active for 90 days.

EXHIBIT H

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
OFFICE OF THE COMMISSIONER
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

June 13, 2025

Dawn Hallowell, Director
Southern Maine Regional Office
Maine Department of Environmental Protection
312 Canco Road, Portland, ME 04103

VIA E-MAIL: dawn.hallowell@maine.gov

RE: NECEC Draft Conservation Plan and Conservation Easement

Dear Ms. Hallowell,

I am writing to provide comments from the Bureau of Parks and Lands ('the Bureau') on the draft NECEC Conservation Plan and Conservation Easement. As you know, the Bureau has agreed to hold the easement according to the terms outlined in a May 5, 2025, letter of preliminary consent.

The proposed easement lies in a geography appropriate for the project: it is bisected by the transmission line, surrounds an existing Public Reserve Land (the Cold Stream Unit), and connects with adjacent landscape-scale conserved lands. As a result, the easement will promote habitat connections during NECEC operation and beyond the line's decommissioning.

While the Department of Environmental Protection (DEP) Order provides broad guidance on the parameters of the conservation plan and easement, it does not define terms such as mature forest and habitat connectivity. Following numerous negotiations among NECEC, Weyerhaeuser, the Department of Inland Fisheries and Wildlife (DIFW), and the Maine Natural Areas Program, discussions concluded with definitions of a minimum measurable and enforceable threshold for mature forest. The Bureau recognizes that most 'mature' forest stands in the easement will be taller than 50 feet and have a higher density than 60 square feet of basal area per acre.

HARLOW BUILDING
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The Bureau also recognizes the unique circumstances associated with this conservation easement. The mature forest definition used here should not be considered a precedent in other regulatory proceedings requiring mature forest. In addition, other approaches to conserving mature forest and promoting habitat connectivity, including alternate definitions of mature forest, fee ownership by the Bureau or DIFW, or the establishment of large set-aside reserves, are worthy of consideration.

One of the Bureau's main priorities in negotiating the easement was the requirement for easement terms that are objective, measurable, straightforward to interpret, and amenable to repeated, consistent, long-term monitoring. Accordingly, the Bureau focused on the following:

- Eliminating subdivisions,
- Specifying riparian management standards (i.e., no-harvest stream buffers) that can be monitored on the ground, from the air, or through remote means,
- Developing forest conditions that can be monitored on the ground, via remote means (e.g., LIDAR), or through forest stand data,
- Establishing a stewardship endowment sufficient to cover the Bureau's long-term monitoring costs, and
- Establishing a limit on plantations.

The Bureau believes these features are consistent with our need for long-term monitoring and enforcement.

The draft easement guarantees permanent foot access to the property in perpetuity. We understand that Weyerhaeuser intends to honor current agreements with the Bureau for motorized access. However, the easement does not convey permanent motorized access rights to the state.

Thank you for the opportunity to comment on this project. Please let me know if you have any questions.

Sincerely,



Andy Cutko
Director

cc: Amanda Beal, DACF Commissioner
Bill Patterson, BPL Deputy Director

EXHIBIT I

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

June 13, 2025

Dawn Hallowell, Director
Southern Maine Regional Office
Maine Department of Environmental Protection
312 Canco Rd., Portland, ME 04103

Re: NECEC 50,000-Acre Conservation Plan

Dear Dawn:

On May 14, 2025, the Maine Department of Inland Fisheries and Wildlife (MDIFW) received the New England Clean Energy Connect (NECEC) 50,000-Acre Conservation Plan. The Plan was required in Condition #39 of the Maine Department of Environmental Protection Site Location/NRPA Permit Number #L-27625-26-A-N, among others, and in Condition #10 of the Maine Board of Environmental Protection Permit Number L-27625-26-F-Z, among others. The parcel presented in the Conservation Plan, , also known as the Parlin Pond Mitigation Parcel, is owned and managed as a working commercial forest by Weyerhaeuser Company. NECEC has filed a Conservation Plan, along with a proposed Conservation Easement (CE) and Forest Management Plan (FMP) for the Mitigation Parcel.

Background

During the review of the NECEC transmission line corridor permitting, MDIFW spent considerable staff time during multiple meetings with the applicant, and through written correspondences, email and telephone exchanges, recommended methods to avoid and minimize impacts to inland fisheries, wildlife, and habitat resources. The route of the NECEC Segment 1 corridor was initially laid out to avoid multiple MDIFW-mapped occurrences of State Endangered, Threatened, and Special Concern species and Significant Wildlife Habitats. MDIFW staff continued to provide further input during the corridor design phase to ensure that certain sections of Segment 1 were redesigned to avoid or minimize direct impacts to other specific resources. Some examples of MDIFW-recommended project minimization efforts that were incorporated included the utilization of taller structures and closer spacing of taller poles that would reduce canopy disruption and allow much taller capable vegetation to grow under the transmission lines, thereby creating better connectivity conditions for overwintering deer in biological deer wintering areas as well as maintaining necessary shading and allowing more functional riparian buffers along certain streams with documented occurrences of State Threatened and Special Concern species. Ultimately, MDIFW recommended mitigation in the form of in-lieu fee and land conservation (outside of the scope of this Conservation Plan) for impacts to certain resources that could not be practically minimized further.

Proposed Mitigation

The permits state that NECEC must protect 50,000 acres for the purpose of mature forest conservation and to promote habitat connectivity. To achieve this mitigation requirement, NECEC proposes to conserve an essentially contiguous block of approximately 50,063 acres, which is adjacent to other conserved lands but bisected by the NECEC corridor. The property will be protected via a conservation easement held by the Bureau of Parks and Lands and will be managed to achieve 50% of the landscape in

mature forest condition by 2065, and in perpetuity thereafter. One-hundred-foot no-harvest buffers will be established around all perennial streams, and the area from 100 feet to 330 feet from perennial streams will be perpetually managed as mature forest. The Plan attempts to strike a balance between commercial forest management on the Mitigation Parcel while also maintaining suitable acreage of mature forest to mitigate for lost connectivity in the forests impacted by the NECEC corridor.

The Plan submits a *"threshold of 50 feet or greater height with a basal area of 60 square feet of native species"* as the definition of mature forest habitat. Importantly, the permits do not specify a definition of mature forest, leaving significant room for interpretation. For example, definitions of economic maturity and ecological maturity can differ substantially. It is MDIFW's position that 50 feet in height meets the minimum goals of mature forest, recognizing that over time, most of the acreage in mature forest on the Mitigation Parcel will exceed this minimum. Ultimately, it is also MDIFW's position that if 50 feet is approved, it should be clear that 50 feet applies to this Plan only and should not be considered a precedent for future mitigation parcels requiring mature forests. If the 50-foot mature forest definition is approved, MDIFW recommends that the mature forest requirements for this Plan be measurable over time, and a monitoring component be required to ensure forest stand compliance. Any forest stand compliance monitoring should be conducted by BPL, as the Holder of the easement, in the future.

Over time, MDIFW believes the Mitigation Parcel will have significantly more mature forest than would have likely occurred under a typical industrial forest management regime, and riparian habitat management standards will greatly exceed those required by law. This will provide benefits to wildlife species that are reliant on mature forests.

MDIFW offers the following specific comments/clarifications on the **Conservation Plan**:

Page 10:

> *In fact, much of the Protected Property has ecological importance as wildlife and fisheries habitat. MDIFW and MNAP have mapped the locations of known special plant or wildlife habitat, including significant wildlife habitats, habitat for rare, threatened or endangered plant and wildlife species, and rare or exemplary natural communities identified in publicly available information that will benefit from the protections afforded under the CE and FMP.*

MDIFW Recommendation: Insert "known", as highlighted above. MDIFW submitted information to Weyerhaueser dated May 13, 2025, detailing the known locations of important species and habitats. A comprehensive survey of the parcel has not been completed, however. Additional surveys are required to determine the presence and location of other plant and wildlife habitats and MDIFW staff welcome the opportunity to conduct additional survey work. The location of mature forest conservation should consider the location of any special plant and wildlife habitats on the Mitigation Parcel.

Page 16:

> *... the MDIFW advocated for 100-foot riparian filter areas (buffers) around all perennial streams in Segment 1 and all coldwater fisheries streams in the other segments.*

MDIFW Comment: During the permit review process, MDIFW recommended 100-foot buffer be maintained along all streams, including perennial, intermittent, and ephemeral streams, within the Project Area, as measured from the upland edge of stream or associated fringe and floodplain wetlands (MDIFW

comments to DEP dated 3-15-2018). We recommend this reference be corrected in the Plan. These enhanced riparian buffer standards are typical recommendations for conservation projects.

Page 16:

> *Harvesting equipment crossings of these perennial streams will be prohibited, except to construct road or skid trail crossings to facilitate forest management activities, in which case those crossings will be minimized and constructed to protect streambank integrity.*

MDIFW Recommendation: Construction techniques for stream crossings or new roads within riparian corridors, including inwater timing and construction Best Management Practices, should be detailed in the Plan for forest activities in the Mitigation Parcel. We recommend that MDIFW be contacted prior to instream or riparian work along streams with occurrences or suspected occurrences of Endangered, Threatened, or Special Concern species to ensure impacts to these resources are minimized in the Mitigation Parcel. Temporary stream crossings rather than permanent stream crossings should be considered whenever possible.

Page 18—Public Access clarification

> *The CE grants the right of pedestrian access for non-intensive outdoor recreational activities. "Nonintensive outdoor recreational activities" means dispersed, non-commercial, non-exclusive, and nonmotorized public recreational activities that do not generally rely on buildings or spectator facilities, such as hunting, fishing, trapping, hiking, nature observation, photography, picnicking, boating, and enjoyment of open space. Such access is subject to reasonable rules and regulations established by Weyerhaeuser to ensure safety during permitted management activities, to permit necessary maintenance, and to preserve the conservation values of the Protected Property.*

MDIFW Comment: References to "pedestrian access" and "non-motorized public recreational activities" here and elsewhere seems to imply—and contradict—statements throughout supporting vehicular traffic via road easements in the Mitigation Parcel. MDIFW recommends this be clarified throughout the Plan as public access, except where discouraged during specific areas active forest operations, is an important component of the Plan.

MDIFW offers the following specific comments/clarifications on the **Conservation Easement**:

Page 4

> *CC. "Wetland" means any area saturated or inundated by water at a frequency or for a duration sufficient to support, and which under normal circumstances does support, vegetation typically adapted for life in saturated soils. In most cases, this would include areas below a recognizable debris line resulting from recurring, not extreme, water action. The "upland edge" of a wetland is the boundary between the upland and wetland, and not the edge of open water. Refer to Exhibit D for a map of wetlands and streams existing at the time of recording this Easement.*

MDIFW Comment: Exhibit D was not included for review

Page 7

Without limiting the generality of the foregoing restriction, except as currently exists as reflected in the Baseline Documentation, residential housing units, condominiums, trailer parks, mobile homes, high-intensity lighting, motels or hotels, commercial advertising, billboards, towers, facilities or transmission lines, antennas or equipment for telecommunications or radar, and use of the Protected Property as an aircraft landing site except in an emergency, are all specifically prohibited.

MDIFW Comment: We recommend that wind power, solar power, and new transmission lines—including the expansion of existing transmission lines—also be specifically listed as prohibitions in this section.

Page 15

D. SURFACE ALTERATIONS

As of the date of this grant, there are no surface alterations on the Protected Property except for unpaved snowmobile trails, ATV trails, foot trails, skid trails, unpaved woods roads and timber landing areas, and culverts and similar erosion control systems, gravel pits, and alterations associated with existing structures, all of which are described in the Baseline Documentation.

MDIFW Comment: See earlier comments regarding public access. Both the Plan and the Easement should be clear on public access and allowance of motorized vehicles in the Mitigation parcel.

Page 16

(b) Standards: Grantor's Permitted Excavation Activities, including any reclamation undertaken following such activities, shall be conducted in accordance with the following standards:

(i) the exposed mineral surface of any new gravel, sand, or rock pit shall be limited to not more than ten (10) acres of exposed mineral surface per site at any time with not more than an aggregate of seventy (70) acres exposed at any one time, and a total aggregate area of mined acreage in perpetuity of one hundred fifty (150) acres for all Permitted Excavation Activities. For any existing pit larger than 10 acres that is identified in the Baseline Documentation, Grantor may continue extractions without changing the footprint of the pit. Changes to the footprint of any such pit must bring the resulting pit within the 10-acre limitation, but not expand further until such portions have been restored to bring the pit within 10 acres in size.

MDIFW Comment: Depending on location, a 10-acre gravel pit could have direct or indirect impacts to resources of concern. We recommend that proposed sites be surveyed for Significant Wildlife Habitat, Endangered, Threatened, and Special Concern species habitat, and rare plants and natural communities, and that DEP and MDIFW review and approve to locations of newly proposed pits to ensure consistency with the intent of the Mitigation Parcel.

Page 17

(ii) All Excavation Activities are prohibited within 330 feet of mapped perennial streams as depicted in Exhibit D. For existing pits in riparian buffers, there shall be no expansion of such pits.

MDIFW Comment: Is there a map of existing pits in riparian buffer available for review?

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,



Nathan Webb
Wildlife Division Director

Cc: John Perry, MDIFW Environmental Review Program Manager
Liz Latti, MDIFW Fisheries Division Director
Ryan Robicheau, MDIFW Wildlife Management Section Supervisor
Phillip deMaynadier, MDIFW Wildlife Diversity Section Supervisor
Bethany Atkins, MDIFW Habitat Section Supervisor
Andrew Wood, MDIFW Environmental Review Coordinator

EXHIBIT J

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

June 12, 2025

Dawn Hallowell
Maine Department of Environmental Protection
Bureau of Land Resources
17 State House Station
Augusta, ME 04333-0017

Via email: necec.dep@maine.gov

Re: Maine Natural Areas Program comments on NECEC Transmission LLC Conservation Plan submitted to Maine DEP on May 9, 2025.

The Maine Natural Areas Program (MNAP) has reviewed the NECEC Conservation Plan submitted to the Maine Department of Environmental Protection (DEP) on May 9, 2025. MNAP's comments are primarily focused on the Introduction, Section 3.2.2 Conservation Values, and 3.3.2 Habitat Connectivity. MNAP recognizes that the DEP Order and Condition did not explicitly define mature forest. However, the definition put forward in the Conservation Plan is not technically in line with the MNAP's scientific basis for defining mature forest. The Conservation Values of the property should be updated to reflect the letter from the Maine Department of Inland Fisheries and Wildlife (DIFW) on May 13, 2025, as summarized below. MNAP also encourages further considerations to enhance the protection of riparian areas to support wetland and aquatic function as well as wildlife connectivity.

Introduction: Mature Forest

The DEP Order and Condition for compliance did not explicitly define mature forest. As a result, the definition is up to interpretation which makes it difficult to define, track, or enforce. The definition put forward in the Conservation Plan is not technically in line with the MNAP's scientific basis for mature forest.

For context, there are varying definitions of mature forest applied by agencies and landowners for management, research, economic, or inventory purposes, and mature forest is not typically defined by height or basal area alone. The NECEC Conservation Plan threshold for "exceptional, mature" forest as meeting a "threshold of 50 feet or greater height with a basal area of 60 square feet of native trees" does not reflect working definitions used by the U.S. Forest Service, the Society of American Foresters and others (e.g., USFS 2024)[i]. Mature forest characteristics will also vary by geography, site productivity, and forest type which add to the complexity of the definition. Characteristics including tree diameter, age, basal area, understory structure, composition of dead trees or decaying wood, and evidence of disturbance are also typically incorporated into the definition and description of mature forest. For height thresholds, the SAF defines trees or even aged stands as mature once the tree or stand has

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"…attained most of its potential height growth…" which for spruce, hemlock, and northern hardwoods ranges from 60-90-plus feet, consistently taller than 50 feet (SAF Dictionary of Forestry 2018). MNAP recommends that the definition of mature forest used in the Plan not be used as a precedent for working forest easements. The Conservation Plan should also be updated to reflect MNAP differs in its characterization of mature forest.

3.2.2: Conservation Value

The Conservation Plan notes the ecological values of the Protected Property and references MNAP-mapped locations of special plants or rare and exemplary natural communities. MNAP has not conducted targeted field inventories of the Protected Property other than within an isolated section along Parlin Stream more than 20 years ago, as indicated in Figure 2 of the Plan. In response to Weyerhaeuser's request for rare botanical features on the Protected Property, MNAP provided the data and noted areas of ecological survey interest on April 17, 2025 (see attached). MNAP awaits permission to access these sites. Furthermore, in a letter to Weyerhaeuser from DIFW dated May 13, 2025 (see attached), MNAP contributed comments requesting permission to update historic records on Parlin Stream and noted that, to our knowledge, limited formal biological or ecological surveys have been conducted on this property. With additional inventory, the Conservation and Forest Management Plans' benefits for rare or significant botanical features could be expanded through recognition of and explicit management for additional conservation values.

3.3.2: Habitat Connectivity, Including Blocks of Habitat and Wildlife Travel Corridors

Additional descriptions and maps related to Exhibits C and D, which were not attached to the publicly available version of the Conservation Plan would be valuable in reviewing the extent of stream and wetland features and road infrastructure on the Protected Property.

The Conservation Plan includes a 100-foot no-cut buffer on perennial streams which is consistent with some habitat conservation programs. However other standards put forward by wetland protection or habitat conservation programs are not fully met in the Plan. MNAP recommends that the standards in the Plan not be used as a precedent for working forest easements.

The Conservation Plan allows for the construction of new roads or skid trails over perennial streams to support harvesting, which has the potential to disturb stream banks and riparian corridors for lengthy periods of time. The use of temporary roads and bridges wherever possible, as well as plans for removal after harvest, would help ensure the protection of streams and riparian areas over the long term.

Sincerely,

Molly Docherty

Molly Docherty | Director | Maine Natural Areas Program
207-287-8045 | molly.docherty@maine.gov

cc: Commissioner Amanda Beal

[i] https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/Mature-and-Old-Growth-Forests.pdf

STATE OF MAINE
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177 STATE HOUSE STATION
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JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

April 17, 2025

Mark Rabon
Weyerhaeuser

Via email: Mark.Rabon@weyerhaeuser.com

Re: Rare and exemplary botanical features in proximity to: 50,000-acre Weyerhaeuser property in Coburn-Parlin area, Maine

Dear Mark:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received April 11, 2025 for information on the presence of rare or unique botanical features documented from within the Coburn-Parlin forest management planning area you sent via shapefile. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in the Natural Heritage Data System files, there is an exemplary Acidic Cliff Gorge and a population of State-Threatened hairy arnica along the north side of Parlin Stream. Some portions of this area are steep, bare rock or not thickly forested, and generally inoperable, and MNAP recommends no harvest or disturbance occur within the mapped feature. If harvesting must occur here, we strongly recommend having MNAP's ecologist come out to walk the site with the forester so the most sensitive areas can be avoided. In addition, hairy arnica (*Arnica lanceolata*) grows on gravelly rivershores or wet cliffs, often where river scour helps reduce competition from other vegetation. To protect this species, we recommend no disturbance within 25 feet of the mapped population. Please see the attached shapefile for occurrence locations, and the attached factsheets for more information about the habitat and rare plant population.

The delineated occurrences and biological data for both the Acidic Cliff Gorge and the hairy arnica population are over 20 years old and considered "historical". In order to maintain the quality of these data, MNAP would like to resurvey these documented sites and update the mapped information.

Although there are no additional mapped rare or unique botanical features documented within the Coburn-Parlin site, this lack of data may indicate minimal survey effort rather than confirm the absence of rare botanical features. Through landscape analysis MNAP has identified a small number of sites where wetlands, steep slopes, or high elevation forest areas appear to have the potential to support unique ecological features. Please see the

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attached shapefile for location information. MNAP requests permission to access these identified sites for field survey to help inform forest management planning and provide an improved understanding of ecologically important non-forested wetlands or other features on the property.

Thank you for using MNAP in your review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site, or if you would like to discuss potential field surveys on the Coburn-Parlin parcel. We would welcome a response regarding our request for additional field surveys on the Coburn-Parlin parcel.

Sincerely,



Kristen Puryear | Chief Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov

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Maine Natural Areas Program

Arnica lanceolata Nutt.

Hairy Arnica



- State Rank: S2
- Global Rank: G3
- State Status: Threatened

Habitat: Ledgy or gravelly shores or wet cliffs, often subalpine. [Alpine or subalpine (non-forested, upland); Non-tidal rivershore (non-forested, seasonally wet)]

Range: Local in east, Gaspé Peninsula and New Brunswick south to mountains of northern New England and New York. Also mountains of Alberta, British Columbia, to Colorado and California.

Aids to Identification: *Arnica lanceolata* has large attractive flowers resembling yellow daisies, with yellow ray flowers and yellow disk flowers on 20-50 cm tall hairy stems. Its 3-5 pairs of opposite leaves are regularly toothed, elliptic, and hairy. The basal leaves are sessile. The upper leaves are not much reduced in size from the lower.



Ecological characteristics: *Arnica lanceolata*, unlike many other unusual plants found on the St. John River in Maine, shows no apparent preference for calcareous or acid rocks. It does seem to require moist conditions where disturbance, lack of soil, or harsh environmental conditions restrict the vigorous growth of most vegetation. Like a number of other unusual species of the St. John River in Maine and the Gaspé, *A. lanceolata* is a Cordilleran species apparently western in origin. Some authors view the eastern populations as a distinct species, others merely a variety of the species found in the Rockies. Both in the West and in most of its few eastern stations, *Arnica* grows in alpine or subalpine habitats. It occurs in Maine at low elevations along the St. John River, as well as on side slopes of Mt. Katahdin.



Phenology: Perennial, blooms July to early September.

Family: Asteraceae

Synonyms: Represented in Maine by ssp. *lanceolata*. Synonyms include *Arnica mollis* Hook. var. *petiolaris* Fern.

Known Distribution in Maine: This rare plant has been documented from a total of 12 town(s) in the following county(ies): Aroostook, Franklin, Piscataquis, Somerset.

Reason(s) for rarity: At southern and eastern limit of range; disjunct from principal distribution; possibly scarce suitable habitat.

Conservation considerations: Populations are small and grow in areas where natural disturbance can remove all or most individuals at one fell swoop.

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dacf@maine.gov
More Contacts



Acidic Cliff

State Rank S4

Community Description

Sparse vegetation occurs on steep outcrops or cliffs of granitic or other acidic rock. Marginal wood fern and rock polypody are characteristic ferns; fragrant wood fern can be found on cooler sites. Rock tripe lichens may form extensive patches.

Soil and Site Characteristics

Sites occupy nearly vertical to vertical outcrops of non calcareous, erosion resistant rocks. Most are dry, with large unvegetated areas; a moist microclimate is maintained over local areas by runoff or seeps from higher elevations, or, in gorges, by the flowing streamwater. Smaller ledges and outcrops (e.g., less than 5,000 square feet of rock exposure) should be considered as inclusions in the surrounding forest rather than distinct natural communities.

Diagnostics

Sparsely vegetated cliffs occur below treeline, without circumneutral indicator species.



Rock Tripe and Rock Polypody

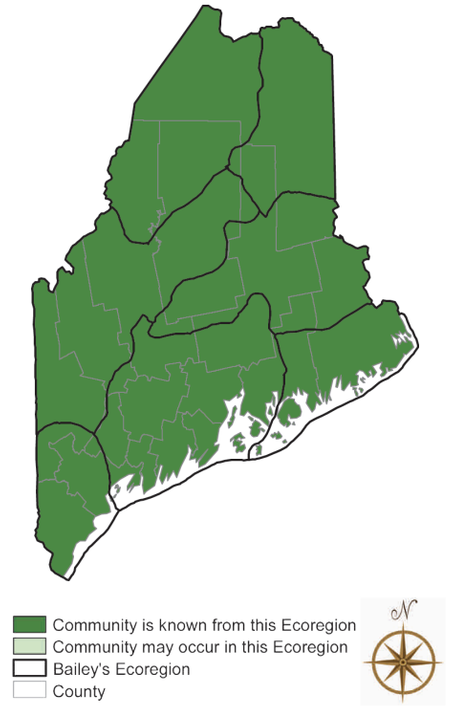
Similar Types

Boreal Circumneutral Outcrops have circumneutral indicator species such as shrubby cinquefoil or certain uncommon herbs. Three-toothed Cinquefoil - Blueberry Low Summit Balds are on summits, not cliffs, and usually have heath shrubs mixed with the herbs.

Conservation, Wildlife, and Management Considerations

Many sites are relatively inaccessible and minimally affected by either forestry or recreational activities. Several are within public lands or conservation ownership.

Location Map





Acidic Cliff - Gorge

Common ravens, peregrine falcons, and golden eagles may nest on cliffs in western, northern and coastal Maine.

Distribution

Essentially statewide except for extreme southern Maine, more common northward.

Landscape Pattern: Small Patch. The minimum mapping unit is 5,000 square feet of rock exposure; smaller ledges and outcrops should be considered as inclusions in the surrounding forest rather than distinct natural communities.



Acidic Cliff - Gorge

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Herb

Brownish sedge
Common hairgrass
Marginal woodfern
Rand's goldenrod
Rock polypody

Bryoid

Rocktripe lichen

Associated Rare Plants

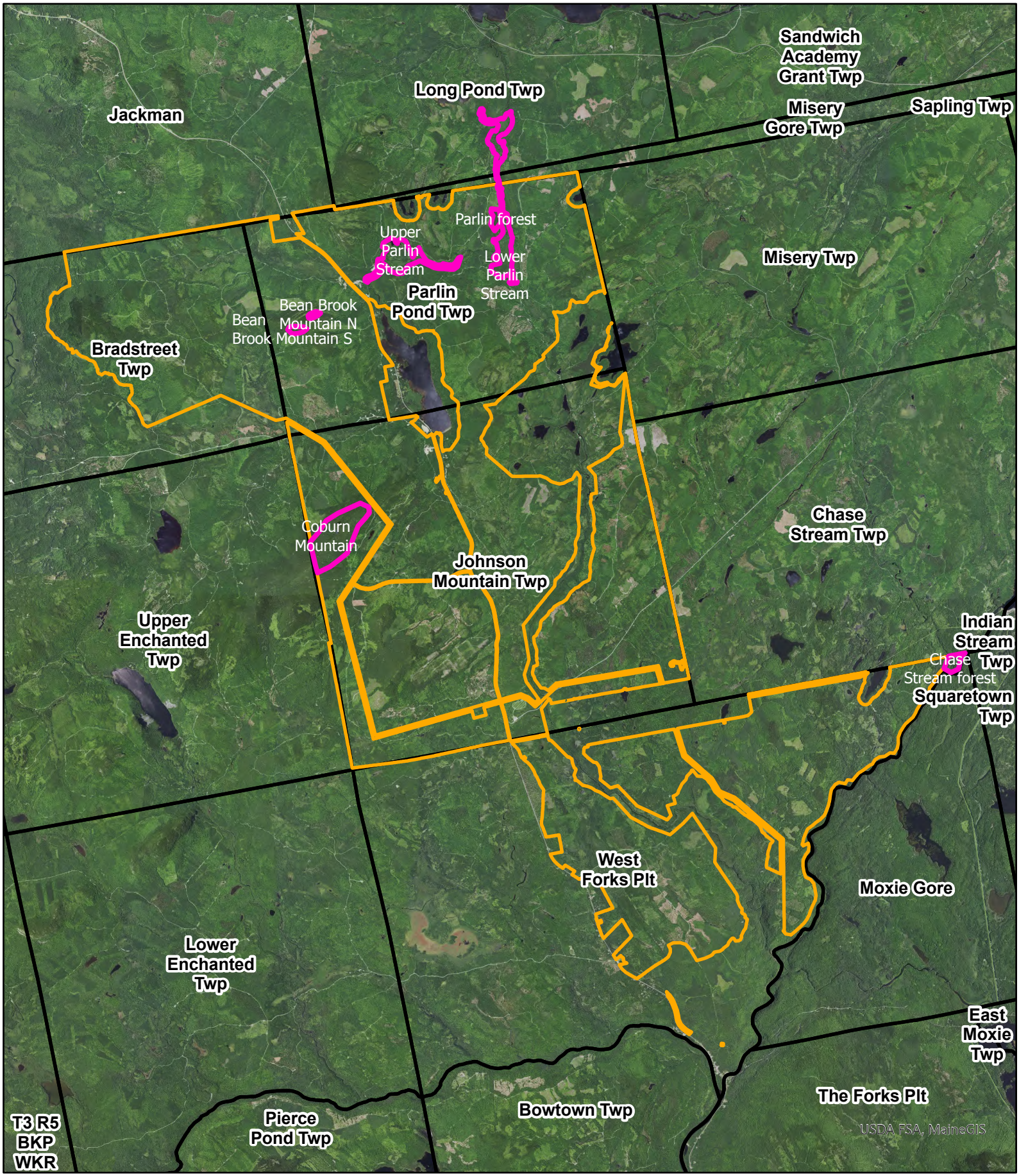
Fragrant wood fern

Associated Rare Animals

Golden eagle
Peregrine falcon

Examples on Conservation Lands You Can Visit

- Deboullie Ponds Public Lands – Aroostook Co.
- Dunn Falls, Appalachian Trail – Oxford Co.
- Grindstone Falls – Penobscot Co.
- Mount Kineo Public Lands – Piscataquis Co.
- Tunk Mountain, Donnell Pond Public Lands – Hancock Co.



Coburn - Parlin Parcel
Bradstreet Twp., Parlin Pond Twp., Johnson Mt Twp., West Forks Plt.

Coburn-Parlin
SurveyInterest 2025

N

0 1 2 Miles

Maine Natural Areas Program, April 2025

Potential Survey Areas, Maine Natural Areas Program - 2025
Coburn-Parlin Parcel, Weyerhaeuser

Site Name	Rationale	Priority
Bean Brook Mountain N	talus field and steep slope	1
Bean Brook Mountain S	talus and steep slopes, mature forest	1
Chase Stream forest	small mature forest area	2
Coburn Mountain	high elevation (>2700 ft.) spruce fir, remote ponds	1
Lower Parlin Stream	Streamshore Ecos or Alder floodplain	2
Parlin forest	mixed forest mature appearance	2
Upper Parlin Stream	rare plant and NC updates needed; larger peatland ecosystem	1

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
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353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

May 13, 2025

Mark Rabon
Weyerhaeuser
Via email: Mark.Rabon@weyerhaeuser.com

RE: Information Request – MDIFW and MNAP Considerations for Forestry Activities on Proposed 50,000-acre Parlin Pond NECEC Mitigation Parcel

Dear Mark:

The Maine Department of Inland Fisheries and Wildlife (MDIFW) appreciates the opportunity to highlight priority fish and wildlife resources on the proposed 50,000-acre Parlin Pond NECEC mitigation parcel. Specifically, MDIFW has reviewed information for locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and high value inland fisheries habitats associated with the proposed mitigation parcel. In April 2025 the Maine Natural Areas Program (MNAP) searched the Program's Natural Heritage Data System files for information on the presence of rare or unique botanical features documented from within the proposed NECEC mitigation parcel. MNAP's response, including GIS shapefile, tabular information, and fact sheets were sent to you on April 17, 2025 under MNAP letterhead; however, we are annotating them to MDIFW's comments here in order to provide one comprehensive response for endangered, threatened, and special concern species and habitats.

Please note: Survey efforts are not complete for these lands. The below includes those species and habitats that are known or suspected to occur on the property, along with links to mapped data and attached Best Management Practices for voluntary protection, where available.

We understand that, under the terms of the conservation easement proposed for this parcel, the property will be maintained to achieve 50% of the forested area as mature forest, defined roughly as 50-foot or taller trees consisting of a mix of native species with a minimum basal area of 60 square feet per acre and that 100-foot no-cut forested buffers will be required along all perennial streams and their associated wetlands with mature forest conditions maintained from 100-330 feet. In many cases, the species-specific recommendations outlined below are subsumed by these overarching riparian buffer standards required by the conservation easement.

Confirmed Endangered, Threatened, and Special Concern Species

The following Endangered, Threatened, and Special Concern Species and exemplary natural communities have been documented on the parcel, with available mapped data for wildlife species here: https://mdifw-data-maine.hub.arcgis.com/search?tags=endangered. Additional potential habitat locations for select rare species is also available from MDIFW upon request. Available mapped data for botanical features were previously sent as a GIS shapefile to you on April 17, 2025 from the Maine Natural Areas Program. To the extent practical, MDIFW recommends that specific management actions be implemented for the following at-risk species that are known to be sensitive to certain intensive forestry practices. MNAP also

recommends specific management actions for documented botanical features, as noted below and as included in the April 17, 2025 correspondence.

- **Bicknell's Thrush-** Bicknell's thrush (State Threatened) occur along the Coburn Mountain range. This bird can be found in sub-alpine forests usually dominated by balsam fir (>30%) where a history of disturbance has resulted in a stunted dense understory, usually at elevations >2,500 feet. Because breeding individuals are known to abandon their nests as a result of disturbance, MDIFW recommends that forestry activities be avoided during the May 1 through July 31 breeding season to prevent injury or harassment of eggs, nestlings, fledglings, or adult birds, and that forest operations planned within the species habitat receive review by MDIFW biologists.

- **Rusty Blackbird-** The rusty blackbird (State Special Concern) occurs at several locations on the parcel. This species has experienced significant decline rangewide, with fewer than 50 current occurrences statewide. Rusty blackbirds typically nest in dense, young or stunted softwoods in or near a wetland or low-gradient streams. MDIFW recommends at least a 100-ft. no cut riparian buffer around any wetland complexes known to host rusty blackbird populations on the parcel.

- **Roaring Brook Mayfly**- The Roaring Brook mayfly (State Threatened) occurs on the parcel. Habitat for this species consists of clean, cold, high elevation headwater streams with coarse substrates generally at or above ~1,000 feet elevation (including unmapped streams) and bordered by relatively undisturbed mixed or hardwood forest. This species has been documented in the Mountain Brook watershed and could be present in other suitable streams draining off any of the prominent peaks in the parcel including Coburn Mountain, Parlin Mountain, Bean Brook Mountain, Johnson Mountain, and Williams Mountain, among others. MDIFW recommends that occupied streams be managed with a 250-ft. riparian management zone, within which the first 50 ft. remains uncut and a mature forest canopy condition is conserved between 50-250 ft. For Best Management Practices for Roaring Brook mayfly, see attached.

- **Hairy Arnica** - A population of hairy arnica (State Threatened) is located along the north side of Parlin Stream. This species grows on gravelly rivershores or wet cliffs, often where river scour helps reduce competition from other vegetation. To protect this species, we recommend no disturbance within 25 feet of the mapped population. Please also note that the delineated occurrence and biological data for the hairy arnica population is over 20 years old and considered "historical". In order to maintain the quality of these data, MNAP would like to resurvey this documented location and update the mapped information. See the attached factsheet for more information about this rare plant species.

- **Acidic Cliff Gorge –** An exemplary Acidic Cliff Gorge natural community is located along the north side of Parlin Stream. Some portions of this area are steep, bare rock or not thickly forested, and generally inoperable, and MNAP recommends no harvest or disturbance occur within the mapped feature. If harvesting must occur here, we strongly recommend having MNAP's ecologist come out to walk the site with the forester so the most sensitive areas can be avoided. Please also note that the delineated occurrence and biological data for the Acidic Cliff Gorge is over 20 years old and considered "historical". In order to maintain the quality of these data, MNAP would like to resurvey this documented location and update the mapped information. See the attached factsheet for more information about the natural community documented here.

Potential Endangered, Threatened, and Special Concern Species or Rare/Exemplary Natural Communities:
MDIFW and MNAP databases do not indicate the confirmed presence of other State-listed Endangered, Threatened, or Special Concern Species or rare or exemplary natural communities; however, to our knowledge limited formal surveys have been conducted on this property. It is possible that other rare species or rare or exemplary natural communities may be resident or transient in the parcel based on geographic range, location of parcel, habitats present, and life history requirements; therefore, the following list should not be considered all-inclusive.

Based on desk-top analysis of the parcel, the following Endangered, Threatened, and Special Concern Species may be present. Additional survey work is necessary to confirm locations and refine management approaches.

- **Bats-** Of the eight species of bats that occur in Maine, four species are afforded protection under Maine's Endangered Species Act: little brown bat, northern long-eared bat, eastern small-footed bat, and tri-colored bat. The remaining bat species are designated as Special Concern: big brown bat, red bat, hoary bat, and silver-haired bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is probable that several of these species occur on the parcel during spring/fall migration, the summer breeding season, and/or for overwintering. Note that the northern long-eared bat is also designated as Federally Endangered, while the tricolored bat has been proposed for Federal Endangered status. For federal implications regarding bats, we recommend contacting the U.S. Fish and Wildlife Service's Maine Field Office.

  Bat Hibernacula - There are no known bat hibernacula on the parcel. Recent research has confirmed bats hibernating in talus slopes in Maine, and an existing data layer of cliff and talus features suggests that this habitat type could be present on the parcel. Larger (>2.5 ha) and more open (fewer than 4 trees >10cm DBH per 100 m^2) talus slopes are more likely to be occupied by bats than smaller, more forested areas. Acoustic surveys in the winter are needed to confirm presence or absence of hibernating bats in any cliffs, talus, or other rocky features. If a subsurface cave or former mine occurs on the parcel, a visual inspection could confirm hibernating bat presence. If a hibernaculum is documented and confirmed to be occupied, tree removal within ¼ mile would be prohibited under MDIFW Chapter 8 Rule of the Maine Endangered Species Act without prior consultation with MDIFW.

  Maternity Roosts - During the maternity season, it is probable that one or more of Maine's bat species is present on the parcel. Per MESA, tree removal is prohibited within 150 feet of any mapped maternity roost trees from June 1 through July 31. However, no maternity roosts have been documented on the parcel at this time.

  For information regarding forest management practices that can benefit bats refer to: "Forest Management and Bats" and "Beneficial Forest Management Practices For WNS-affected Bats: Voluntary Guidance for Land Managers and Woodland Owners in the Eastern United States": https://www.whitenosesyndrome.org/static-page/management-practices

- **Great Blue Heron-** The great blue heron (State Special Concern) has experienced an 82% decline in the coastal breeding population from 1983 to 2018. Since 2009, MDIFW has been monitoring

the statewide population to determine if the decline seen along the coast is also occurring statewide. Great blue herons build large stick nests in live, dead, or dying trees, and may nest in uplands, wetlands, or on islands. Great blue herons nest in groups and generally occupy colonies from April 1st through August 15th. During this time the birds are often sensitive to disturbances caused by human intrusion, noise, and predators, and may abandon a colony as a result. MDIFW recommends that forest harvesting be avoided during this nesting period when operating within 1,320 ft of the nesting colony, and that any large overstory trees be left uncut within 660 ft of a known colony. A great blue heron colony has been documented in the vicinity of nearby Williams Mountain; however, not all colonies have been mapped in Maine, so it is possible that heron colonies occur on the parcel.

- **Northern Bog Lemming-** Northern bog lemmings (State Threatened) may occur on the parcel. This species usually occurs in alpine sedge meadows, krummholz, spruce-fir forest with dense herbaceous and mossy ground cover, acidic wet meadows, and mossy stream-sides in western mountain and northern areas of Maine. Lush mats of sphagnum moss appear to be an important habitat feature for this species. Northern bog lemmings could be present in such areas with suitable habitat conditions. MDIFW recommends that potential habitats be left undisturbed by forest operations and protected by at least 100-ft no cut forest buffer.

- **Blackpoll Warbler-** Blackpoll warblers (State Threatened), are associated with large patches of high-elevation (usually > 2500 ft) spruce-fir forest with a moderate to dense canopy of conifers of small or mixed diameter. MDIFW predicts breeding presence of this species on Coburn Mountain. Additionally, Bean Brook and Parlin Mountains may have suitable habitat. Pending confirmation of species presence, MDIFW recommends: a) conservation of mature and regenerating spruce-fir forest above 2,500 ft, b) avoidance of timber harvesting during the breeding season (May–August), and c) harvest treatments designed to regenerate dense native conifer cover, with retention of some live legacy canopy trees and snags.

- **Northern Spring Salamander-** Northern spring salamander (State Special Concern) is likely to occur on the parcel. This species occupies first and second order perennial or intermittent, higher elevation (generally above ~500 ft.) headwater streams (mapped or unmapped) in hardwood or mixed forests underlain by coarse substrate (rock, cobble, gravel). Northern spring salamanders are likely to be found in such tributaries draining off of Johnson Mountain, Cold Stream Mountain, and Bean Brook Mountain. There may be other suitable streams on the parcel and a closer examination of topographic maps and NHD hydrological layers would help to identify potential habitat. MDIFW recommends that occupied streams be managed with a 250-foot riparian management zone as described in the attached Best Management Practices document for this species.

- **Wood Turtle-** Wood turtle (State Special Concern) may occur on the parcel. Wood turtles prefer slow-moderate moving streams and rivers, often with deep pools and woody debris. Outside of the over-wintering season when they are dormant in streams, wood turtles are semi-terrestrial, occupying riparian meadows, shrub thickets, farmland, forests, forested wetlands, and floodplain vernal pools. Based on a desktop analysis, wood turtles are likely to occur in Bean Brook and Parlin Stream in Parlin Pond TWP. MDIFW recommends that occupied streams be managed with a 300-foot riparian management zone, using the Best Management Practices attached.

- **Exemplary Natural Communities and Rare Plant Populations-** As described above only one rare plant population and one exemplary community have been documented on the parcel, however this may indicate minimal survey effort rather than confirm the absence of rare botanical features. Based on desk-top analysis of the parcel, MNAP has identified a small number of sites where wetlands, steep slopes, or high elevation forest areas have the potential to support unique ecological features. Please reference the shapefile sent on April 17, 2025, for location information. MNAP requests permission to access these sites for field survey to help inform forest management planning and provide an improved understanding of ecologically important non-forested wetlands or other features on the property.

Essential Habitat
There is no Essential Habitat mapped on the parcel.

Significant Wildlife Habitat
Significant Wildlife Habitats are defined under the Natural Resources Protection Act. Mapped data is available for download here https://mdifw-data-maine.hub.arcgis.com/search?tags=swh. Occurrences within the parcel include:

- **Deer Wintering Areas/Fish and Wildlife Protection Subdistricts (DWA/P-FW):** The parcel contains DWAs that provide important overwintering cover for white-tailed deer. DWA travel corridors contain similar habitat qualities and provide the means for DWA ingress and egress. A P-FW (#080412), in Parlin Pond TWP is mapped in the northeast of the parcel. Additionally, a "Biological" Deer Wintering Area (BDWA), associated with the Moxie Stream DWA (P-FW #060065) is mapped in the southern portion of the parcel. BDWAs are areas identified as being supportive of wintering deer as documented by historic and recent survey efforts, often during times of temperature and snow depth moderation through the course of the yarding period. This BDWA complex is associated with P-FW #060065 and the adjacent Cold Stream Forest managed cooperatively for DWA habitat by the Department of Agriculture, Conservation and Forestry and MDIFW. MDIFW recommends that suitable areas be managed to promote softwood cover to enhance overwintering deer habitat, including within and expanding on the existing boundaries of Moxie Stream biological DWA #060065. Guidelines for Managing Deer Wintering areas in Northern, Western and Eastern Maine are available here. https://www.maine.gov/ifw/docs/DWA_Guidelines_2.4.10.pdf

- **Inland Waterfowl and Wading Bird Habitat (IWWH):** This parcel contains IWWHs, a Significant Wildlife Habitat under Maine's Natural Resources Protection Act. An Inland Waterfowl and Wading Bird Habitat (IWWH) area includes the wetland area plus a 250-foot-wide zone of upland habitat around the wetland. MDIFW recommends that disturbance (permanent clearings, roads, etc.) be minimized and any harvest activity closely adhere to BMPs for water quality and wetland protection (e.g. harvest on frozen or dry soils only) and be conducted using uneven-aged forest management practices. Volume removal should not exceed 30% in a 15-year period, and a well-distributed overstory should be maintained. No trees should be cut within 75 feet of the wetland edge. Within 250 feet of the wetland edge, MDIFW recommends that special consideration be given to retaining snags and live trees with cavities that will benefit cavity nesting waterfowl and many other wildlife species. For more information about IWWHs, contact an MDIFW Regional Biologist.

- **Significant Vernal Pools (SVP):** At this time MDIFW has mapped one Significant Vernal Pool (SVP) on, or immediately adjacent to, the parcel. However, a comprehensive statewide inventory for SVPs has not been completed so it is probable that other SVPs are present. Surveys should be conducted by qualified biologists to determine whether there are additional SVPs present on the parcel. MDIFW recommends that all high value vernal pools be managed using the attached Forestry Habitat Management Guidelines for Vernal Pool Wildlife.

Aquatic Resources

- **State Heritage Fish Waters-** There are waterbodies on the parcel designated as State Heritage Fish Waters, which are lakes and ponds that host high quality populations of native wild brook trout. Brook trout require clean, well-oxygenated water and are very sensitive to changes in riparian habitat and water quality. MDIFW recommends 500-foot mature forest riparian buffers incorporated around any Heritage Fish Waters, including:

    - Markham Pond- 0158
    - Mountain Pond #2- 0160
    - Little Wilson Hill Pond- 0162
    - Toney Pond- 4078
    - Wilson Hill Pond- 4064

  Heritage Fish Waters data is available here: https://mdifw-data-maine.hub.arcgis.com/search?q=heritage%20fish .

- **Riparian Buffers:** Additionally, the parcel contains numerous other lakes, ponds, and streams that provide potentially suitable habitat for cold water fisheries, including wild brook trout. Conserving intact riparian forest buffers on these habitats is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support fish and other aquatic species. Riparian buffers also provide critical habitat and important travel corridors for a variety of wildlife species. Consistent with the terms presented in the Conservation Easement MDIFW recommends that 100-foot no cut, forested buffers be maintained along all perennial streams and associated bordering wetlands, along with conservation of mature forest conditions between 100-feet and 330-feet as measured from the upland edge of all perennial streams and any contiguous wetlands.

- **Stream Crossings:** MDIFW further recommends that stream crossings be avoided when possible, but if a stream crossing is necessary, or an existing crossing needs to be modified, it should be designed to provide for full aquatic passage. Undersized crossings may inhibit important ecological functions and become a maintenance problem that causes reoccurring damage to the resource. All new, modified, and replacement stream crossings should be sized to span at least 1.2 times the bank-full width of the stream. In addition, new stream crossings should be open bottomed (i.e., natural bottom spans) where possible. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils can travel significant distances as well as transport other pollutants resulting in impacts to fish and other aquatic life. Additionally, any necessary instream work should occur between July 15 and October 1.

In closing, MDIFW and MNAP recognize that it requires specialized expertise to identify many of the habitats occupied by the priority species highlighted above. As such, we welcome the opportunity to work with Weyerhaeuser to conduct further (remote and field-based) surveys for a more comprehensive understanding of the distribution of sensitive plant and wildlife populations on the mitigation parcel. Please contact our office if you have any questions regarding this information, or if we can be of any further assistance.

Best regards,

Nathan Webb
Wildlife Division Director

EXHIBIT K

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Ms. Dawn Hallowell
Director, Southern Maine Regional Office
Maine Department of Environmental Protection
312 Canco Rd,
Portland, ME 04103

June 12, 2025

RE: NECEC Conservation Plan – Opportunity for Comment

Dear Ms. Hallowell:

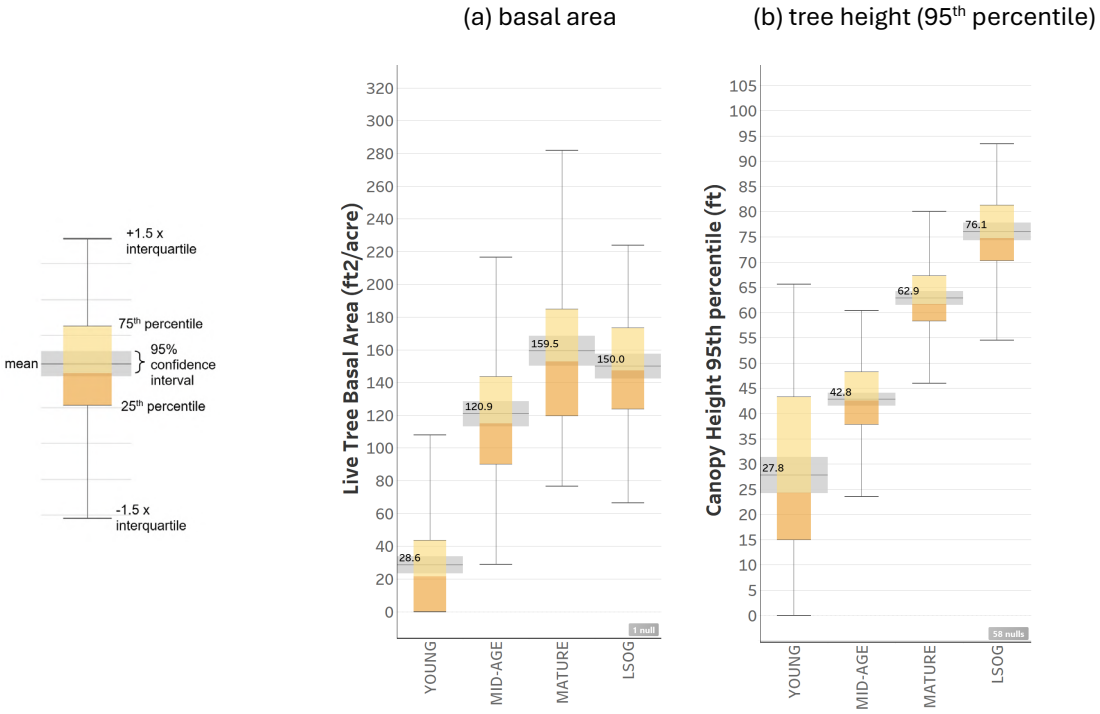
This letter provides public comment on the New England Clean Energy Connect (NECEC) Conservation Plan ("Plan") submitted by NECEC Transmission LLC ("NECEC LLC") to the Maine Department of Environmental Protection (DEP) on May 9, 2025. I present these comments as an experienced forest ecologist who has studied commercial forestry in Maine over the past three decades. Most of my studies have been done in partnership with commercial landowners, including Weyerhaeuser, the landowner involved in this easement. Before I offer my comments and analyses, I should be clear that I am a proponent of the corridor. To me, climate change is the primary threat to our children's well-being, and to biodiversity, in the 21st century. We need clean energy, and we need those who have capital and wherewithal to make it happen.

While acknowledging the environmental benefits of clean energy, the corridor through western Maine will also have (is having) a negative environmental impact on wildlife and biodiversity. As a society, we try to balance our many diverse values (e.g., our desire for both clean energy and wildlife habitat). The proposed conservation easement represents an effort to balance those values. My comments here are intended to help society achieve a better balance so that we can move forward with our need for clean energy. I hope these comments assist in effective mitigation of the negative environmental impacts of the corridor.

Definition of "mature forest"

Having spent decades doing forest plot surveys in Maine's commercial forest, the "mature forest" definition proposed in the Conservation Plan does not pass an ecological straight-face test**. If 60 ft^2/acre of basal area with some trees at least 50 ft tall is the criterion Weyerhaeuser is willing to meet, then call it "partially-cut mid-age forest." It is simply not "mature forest."** The Conservation plan further loses credibility on page 4 where is states "… there is ample evidence in the record to support a threshold condition of those forest stands that achieve a minimum height of 35 feet." Based on my field experience, mature forest would have a basal area of at least 120 ft^2/acre and trees at least 60 ft tall (see Figure 1). The Conservation Plan further states on page 4 that the 60ft^2/35' criterion "supports wildlife," as if *all* wildlife requires this specific condition. Indeed, the corridor, once built, with 0ft^2 basal area/acre, will provide habitat for many important early-successional bird species. But early-successional habitat is not limited in the transmission

Figure 1. Basal area (a) and tree heights (b) of different age-classes of forest, based on our studies of birds and LSOG forest in the unorganized townships of Maine, 2021-2024. [1,2] Canopy heights are based on highly accurate LiDAR data. (n=463 plots)



[1] Levy, F.S., Reed, J.M., McKinley, P.S., Gunn, J.S., Anderson, K. and Hagan, J.M., 2025. Increased bird abundances over 30 years in an extensive commercial forest landscape. Biological Conservation, 302, p.110934.

[2] Hagan, J., B. Shamgochian, M. Taylor, and M. Reed. 2024. Using LiDAR to Map, Quantify, and Conserve Late-successional Forest in Maine. Our Climate Common Report, Georgetown, Maine. 44 pp. (link)

corridor area of Maine or the commercial forest landscape of western Maine. By contrast, late-successional and old-growth (LSOG) is extremely limited and declining.

LSOG forest within the proposed easement

The stated purpose of the easement is to conserve and increase "wildlife habitat" over time. LSOG forest is a very special type of "wildlife habitat." LSOG forest represents age-classes of forest that are beyond the optimum rotation age in a typical commercial forest in Maine, which is why LSOG forest is disappearing**.** If the purpose of the easement is to mitigate habitat loss and fragmentation resulting from the transmission corridor, why not address one of the most at-risk forest age-classes in Maine, and indeed globally—LSOG forest—through the habitat-mitigating NECEC easement?

Using LiDAR, in 2024 my organization (Our Climate Common) completed a map of LSOG forest in the 10M-acre unorganized territory of Maine[1]. Our analysis of the proposed easement area indicates that 95.8% of the area is "Not LSOG." This compares to 80.3% average for the entire 10.4M acres (4.2M hectares) of unorganized territory of Maine (Table 1). The proposed easement area also

[1] Hagan, J., B. Shamgochian, M. Taylor, and M. Reed. 2024. Using LiDAR to Map, Quantify, and Conserve Late-successional Forest in Maine. Our Climate Common Report, Georgetown, Maine. 44 pp. (link)

Table 1. Summary of easement area by LSOG forest within the proposed NECEC easement, and in the 10M+ acres of Unorganized Territories of Maine.

		Proposed NECEC Easement		Unorganized Territories	
	Class	Hectares[1]	Percent of Landscape[2]	Hectares[1]	Percent of Landscape[2]
1	Not LS	18,063	95.8%	3,336,192	80.3%
2	Transitioning LS	737	3.9%	662,696	15.8%
3	Late-successional	42	0.2%	124,821	3.0%
4	"Old-growth like"	8	0.0%	37,060	0.9%
	TOTAL	18,850	100%	4,185,869	100%

[1] Land hectares below 2700' in elevation
[2] Percent of total land hectares analyzed.

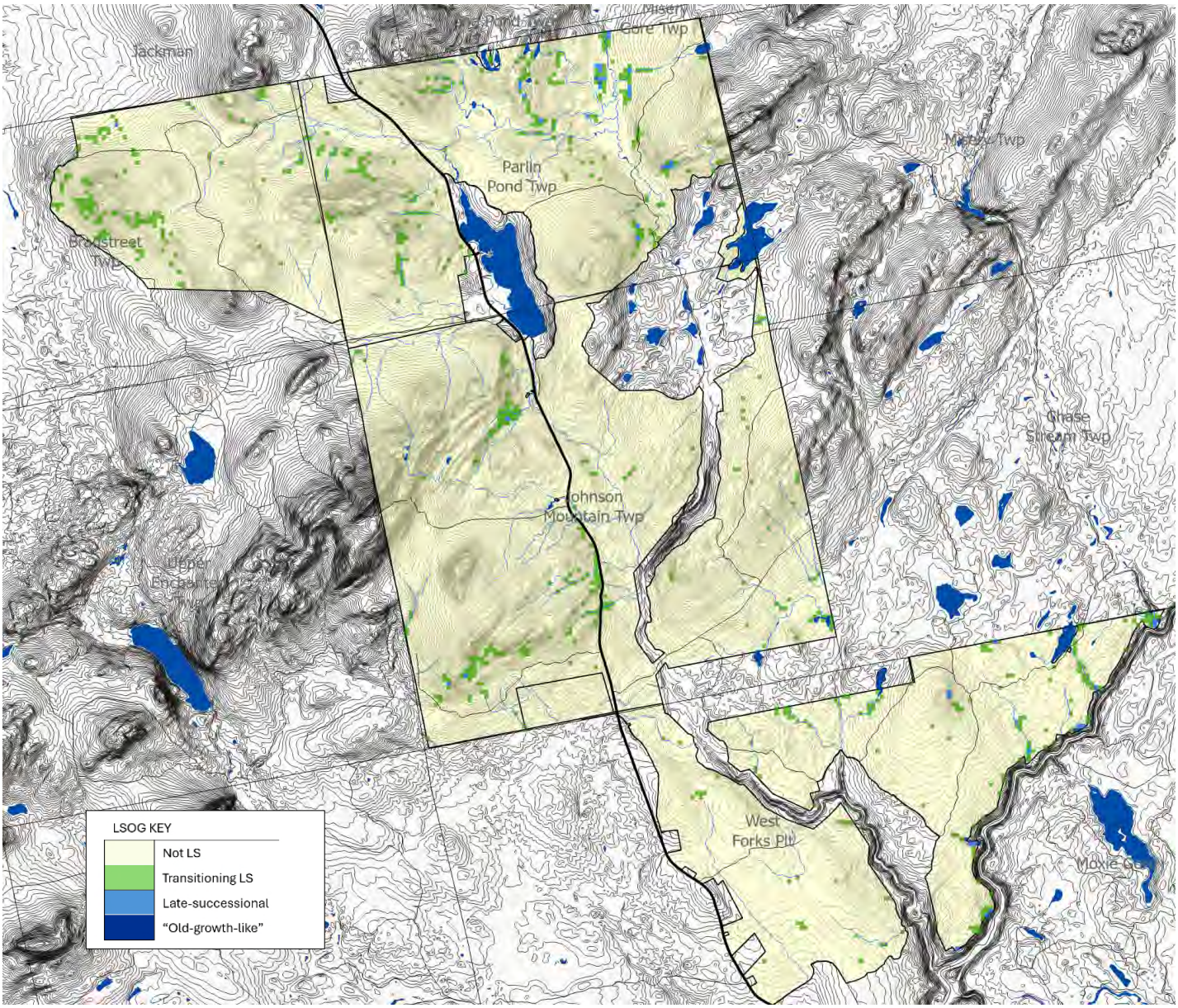
has a much lower percentage of Transitioning LS forest (3.9%) relative to the unorganized territories overall (15.8%). Finally, the easement area has only a 0.2% in the LS and OG classes, as compared to 3.9% for the unorganized territories on average (see Table 1). But even this 0.2% can be critical for ecological restoration of the larger landscape over time—a goal of the easement. There is a total of 1,943 acres of Transitioning LS, LS, and OG forest in the proposed easement area (see Table 1).

Figure 2 shows the current distribution of LSOG forest in the proposed easement. Even small 1-ha (2.47 ac) patches of LSOG forest can be ecologically significant. Many of the species most tightly associated with LSOG forest (lichens, mosses, liverworts) can persist for decades in small patches of LSOG forest. While these species do not need much area to survive, they do not disperse across the landscape very well. It can take them a long time (decades) to reach a nearby forest stand that grows into an LSOG condition. This is why these small patches of LSOG are so significant today. If we hope to restore these species to a larger area someday, these "lifeboats" of LSOG will be key. If biodiversity conservation is a goal of this easement, the easement developers could consider making these remnants of LSOG forest off limits to timber harvesting. Indeed, the landowners will need to be compensated for the forgone timber revenue, but the biodiversity benefit of the easement would be greatly increased.

Figure 3 shows a closer look at a small LSOG stand in the northeastern corner of the proposed easement. Both the LiDAR-derived canopy height model (3a) and the LSOG classification are shown together (3b). Note the "blue-magenta" pixels in 2a. These are areas with trees 75-90' tall, which classify as LSOG forest (see Hagan et al. 2024). The black areas are areas less than 6' tall and tend to be roads, clearcuts, wetlands, or relatively recent skidder trails in a harvest block. Note that it looks like the northern half of an LSOG stand was recently harvested (see arrow in 3a). The easement instrument could incorporate the protection of such rare habitat.

The Conservation Plan also incorporates a 100' no-harvest buffer along all streams (see Figure 3b). At least over time, these no-cut buffers will grow into LSOG forest. Some buffers already are LSOG forest (see close-up in 5b). In the easement area, there are 2,633 acres of forest in this designated 100' buffer. Under the Conservation Plan, most all of these acres will become LSOG forest sometime in the future.

Figure 2. LSOG map for proposed NECEC conservation easement. There is a total of 1,943 acres (787 ha) of LSOG forest in the proposed easement area.



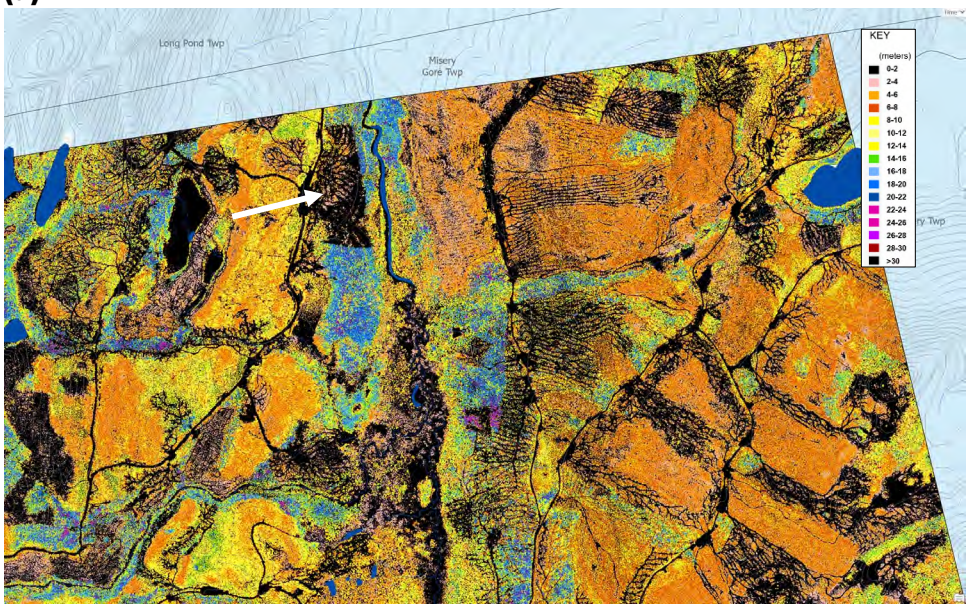
Of the 1,944 acres of LSOG in the easement area, 240 acres fall within the proposed 100' stream buffers. This represents 12.34% of all the LSOG acres in the proposed easement. These 240 acres represent 9.1% of the 2,633 acres within 100' stream buffers.

Current forest height in the proposed easement

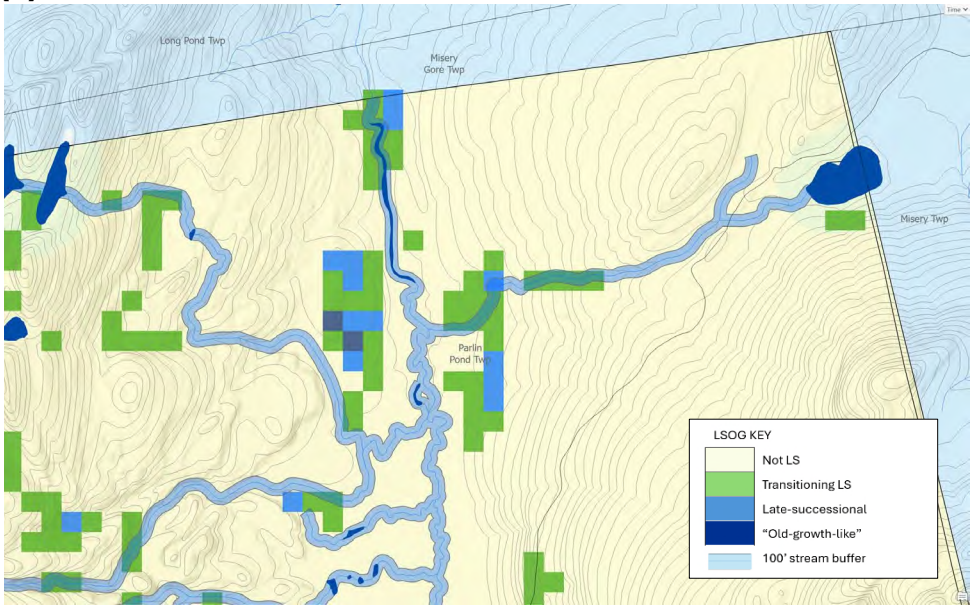
The proposed easement area has been one of the most intensively harvested areas of the unorganized township area of Maine in the last 20+ years (Figure 4.). This is not unexpected given that it is privately owned commercial forest and relatively close to mills.

Figure 3. Close-up of northeastern corner of the easement. (a) forest canopy height model in 2-m (6.6 ft) increments, and (b) the LSOG classification of the same area. Note the blue-magenta color in (a). These colors tend to indicate LSOG forest (see computer classification in 2b. These "blue-magenta" stands should be protected from harvest if LSOG forest is a value of public interest. Once lost, this forest age-class is difficult to rebuild. Black represents 0-2m height (roads, wetlands, recent harvests). Note the recently harvested LSOG forest as indicated by the arrow in 5a.

(a)

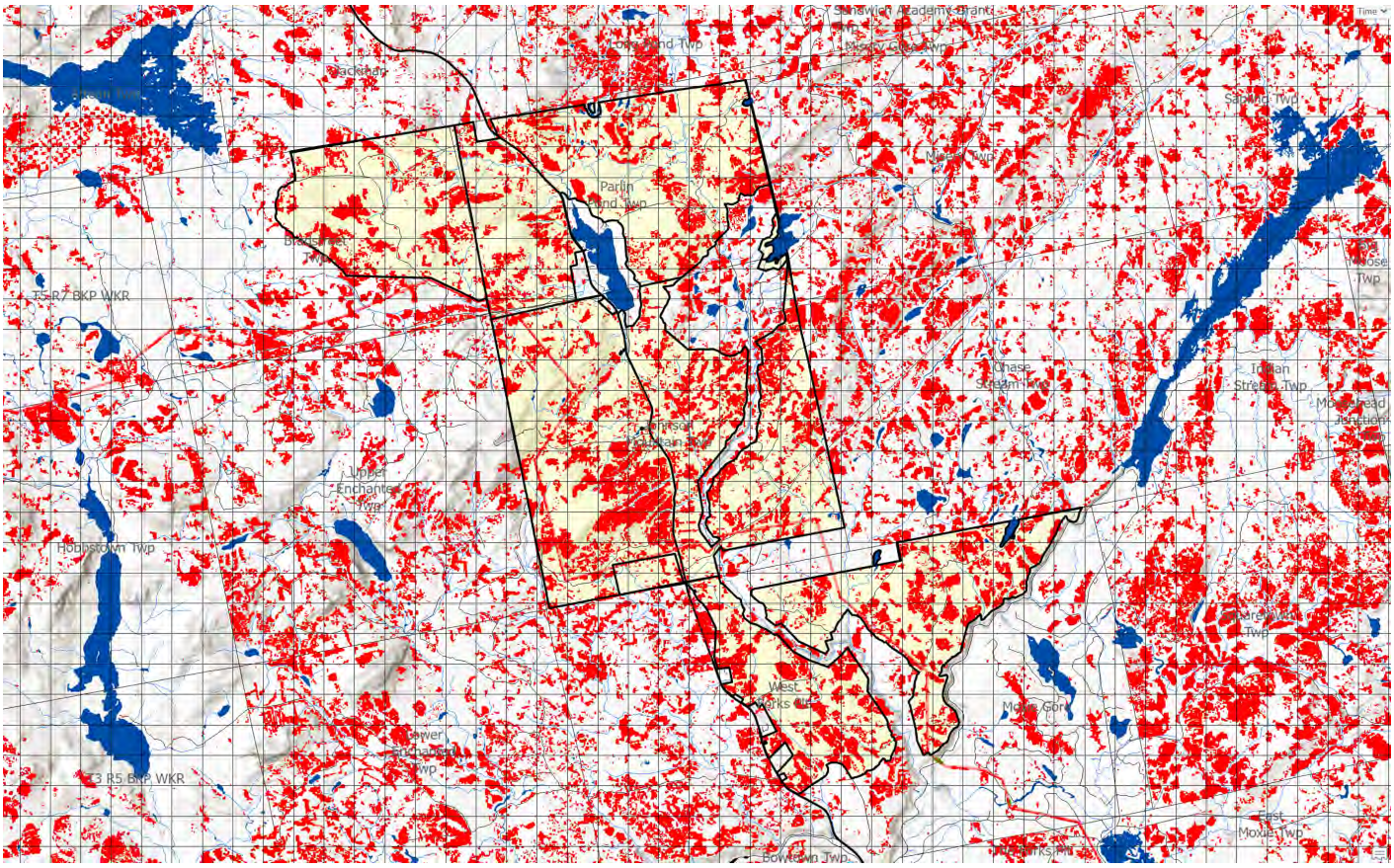


(b)



I used publicly available airborne LiDAR data from 2016 to estimate height of the forest in the Conservation Plan easement area. Very accurate estimates of canopy height can be derived from LiDAR, usually within 5 or 10 cm (2-4"). LiDAR allows an estimate of canopy height for every square

Figure 4. Harvest blocks (red) between 2001 and 2023 in the proposed easement and vicinity. Grid 1km^2. Data from Global Forest Watch. (https://data.globalforestwatch.org/). The initial clearing for the corridor is evident.

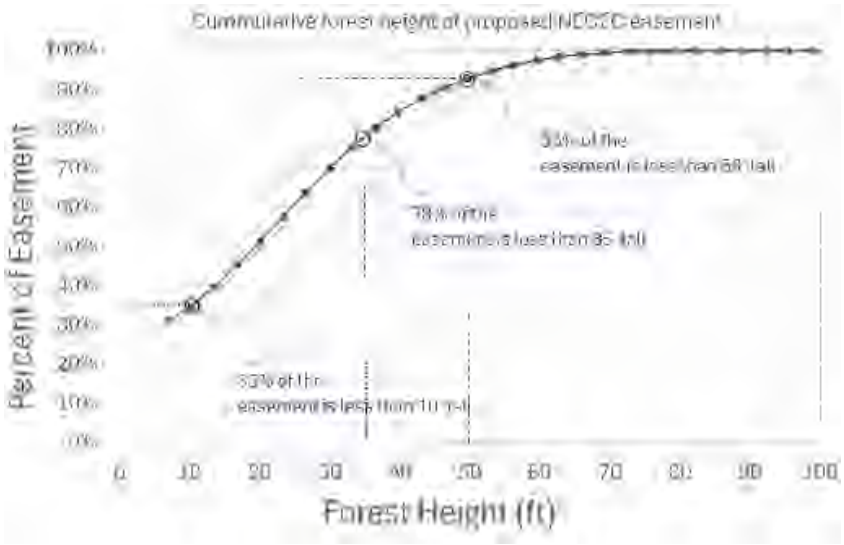


meter in the area of interest. There are some 206,500,000 data points from which to generate a canopy height distribution for the proposed easement area.

Because LiDAR data were obtained in 2016, I added 7 feet (2.13m) to all heights in the data layer, allowing for forest growth since then. I then derived the height distribution from the growth-adjusted canopy height data (Figure 5). This adjustment errs towards an *overestimate* of current height because the 2016 LiDAR does not include harvested areas since that time, which would result in a reduction in height.

I found a discrepancy between the height of the forest reported in the Conservation Plan and LiDAR-derived heights. The Conservation Plan states that 40% of the easement area is greater than 35' tall. By contrast, growth-adjusted LiDAR data indicate that only 22% of the forest greater than 35' tall (Figure 5). The difference is probably methodological. Foresters might classify an entire stand as 35', even if just some of the trees are 35'. LiDAR classifies the height of every square meter in a stand, whereas a forester might assign a maximum height to a whole stand, irrespective of any canopy gaps resulting from prior harvesting. A second common stand descriptor called canopy closure is used by foresters to describe stocking level (A=closed canopy, D=very open canopy, such as a recent shelterwood harvest). While the differences between my analysis of canopy height and the Conservation Plan's analysis may be methodological, it is still good to know the *true* height of the entire landbase with the 1-m^2 precision provided by LiDAR data.

Figure 5. Forest height of proposed easement area derived from growth-adjusted 2016 LiDAR data.



Probably for the same reasons, my estimate of the amount of forest greater than 50' tall also differed from the Conservation Plan. I found 7% of the area of interest greater than 50' tall. The Conservation Plan reports 13%.

Conclusion

I encourage the easement planners to:

(1) consider including a moratorium on harvesting any remaining LSOG forest, regardless of whether it is in a 100' riparian buffer.

(2) avoid the use of "mature forest" if the easement forest specifications are to remain set at 60ft^2/acre of basal area and trees at least 50' tall, or come up with a definition that is ecologically credible with the broader scientific community.

I hope these comments are helpful in balancing our many environmental interests.

Sincerely,

John Hagan, Ph.D.
President and CEO
Our Climate Common

EXHIBIT L

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June 12, 2025

Dawn Hallowell
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Portland, ME 04103
necec.dep@maine.gov

RE: NECEC Conservation Plan Comments

Dear Ms. Hallowell,

I am a licensed forest and ecologist and have spent decades focusing on wildlife habitat management in Maine's forests. I have reviewed the NECEC Conservation Plan and have the following comments.

Mature Forest Definition is Inadequate

The July 21, 2022 Board Order, page 57, states:

> *Here, the Order sets out the guidelines to ensure the conservation parcel(s) and the management of these lands achieves the intended purpose, including the requirement that the Department review and approve the Conservation Plan. This Conservation Plan must contain, among other things, a draft forest management plan establishing how the conservation area(s) will be managed. The areas must be managed consistent with the primary goal of the Conservation Plan – compensating for the fragmenting effect of the transmission line on habitat in the region of Segment 1 and the related edge effect. This includes providing (1) blocks of habitat for species preferring mature forest habitat and (2) wildlife travel corridors along riparian areas and between mature forest habitats. While, as noted above, commercial timber operations are not expressly precluded, standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan.*

The Conservation Plan defines Mature Forest as an area with trees at least 50 feet tall and with a basal area (BA) of at least 60 square feet. Forest stands of this height and density are most commonly what are called "pole" or mid-aged stands and are far from being mature. Using a general rule of thumb of 1 foot of growth per year for most species from early- to mid-age, a stand 50 feet in heigh is likely to be about 50 years of age, and maybe less for fast growing hardwoods. These are intermediate-aged forests that do not have large trees that provide wildlife denning and nesting sites, multiple canopy layers that provide nesting and feeding habitats for different bird species guilds (for example, mature overstory canopy nesters, mid-story nesters, or a shrubby layer for species that nest and feed there), and large

downed and decaying trees that provide habitat for insects, fungi, small mammals, which in turn benefits larger predators. Depending on harvest history, some stands meeting the minimum Conservation Plan definition could have larger residual trees, but at 60 square feet BA the overstory canopy would be very open and not desirable habitat for many species that prefer mature forest habitat.

My wildlife habitat evaluations have found that the majority of canopy trees in stands used by mature-forest wildlife are at least 65 feet in height, and canopy dominants often exceed 75 feet on average sites. However, I do not recommend using tree height as a measurement for mature forests in a regulatory context because it is impossible to define which trees in the canopy should be measured in a way that can provide consistent and reliable verification that the permit requirements are being met. Instead, stand stocking measures including volume, basal area, and the basal area in large trees is a much more reliable way to identify forests that provide mature forest habitat.

In my experience assessing and managing for wildlife habitat and reviewing scientific literature, minimum standards for mature forest wildlife habitat would be at least:

> **Northern Hardwoods:** minimum 25 cords per acre, basal area of at least 80 square feet, and a minimum basal area of 40 square feet in trees at least 12" diameter at breast height (DBH).
> **Mixed Hardwood/Softwood:** minimum 33 cords per acre, basal area of at least 100 square feet, and a minimum basal area of 50 square feet in trees at least 12" diameter at breast height (DBH).
> **Softwoods:** minimum 40 cords per acre, basal area of at least 120 square feet, and a minimum basal area of 60 square feet in trees at least 12" diameter at breast height (DBH).

To ensure that components of old and complex forests are also present, regional wildlife management guides[1] recommend that at least a significant area of forested landscapes should include trees of at least 16" DBH. Because the focus of the Conservation Plan is to ensure that there are blocks of habitat for mature-forest specie,

> **Old/Complex Stands:** At least 20% of the area in mature forest as defined above should have at least 40 square feet of basal area in trees at least 16" DBH.

Note that these recommendations are for wildlife that prefer mature forests. A truly ecologically mature forest would be much older and generally more heavily stocked.

Other Comments

Business as Usual. The Conservation Plan of at a minimum of 50% meeting the Plan's proposed definition of mature forests is inconsistent with the Board Oder to provide mature forest habitat and

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[1] Degraaf et al. 2006. Technical Guide to Wildlife Habitat Management in New England. University of Vermont Press;
Maine Audubon. 2017. Forestry for Maine Birds (see pages 83-84);
New England Forestry Foundation. Acadian Exemplary Forestry Standards and Metrics.
R. Bryan. 2007. Focus Species Forestry: A Guide to Integrating Timber and Biodiversity Management in Maine (ee page 67)

ignores the Board Oder that “standard sustainable forestry operations commonly allowed in areas subject to working forest easements would not be consistent with the primary goal of the Conservation Plan.” Ater the forest reaches the 50% goal in 2065 as described in the Conservation Plan, by my calculations, clearcutting or other heavy harvesting could proceed at a sustainable rate of over 4,000 acres every 10 years. This is essentially business as usual commercial forestry and does not meet the intent of the Board Order.

> Recommendation: To meet the intent of the Board Order, a significantly higher percentage of mature forest (as defined above) should be required.

Adequate Forest Blocks of Mature Habitat are Not Ensured. How mature forest blocks are situated on the landscape are critical too. While corridors managed for mature forest such as those along riparian area are important, when riparian management areas such as those proposed in the Plan (up to 330 feet from a stream) and other linear corridors are located adjacent to heavily harvested areas they do not provide the same interior-forest habitat as more rectangular blocks.

> Recommendation: When accounting for mature forest habitat blocks, corridors of mature forest that are less than 1,000 feet in width should not be included.

Thank you for allowing me the opportunity to comment on the Conservation Plan.



Robert R. Bryan
Maine Licensed Forester #907

EXHIBIT M

IN THE MATTER OF

CENTRAL MAINE POWER COMPANY	)
NEW ENGLAND CLEAN ENERGY	)
CONNECT	) APPLICATION FOR NATURAL
25 Municipalities, 13 Townships/Plantations,	) RESOURCES PROTECTION ACT PERMIT
7 Counties (listed Appendix A)	) AND SITE LOCATION OF DEVELOPMENT
L-27625-26- A-N	) ACT PERMITS
L-27625-TB-B-N	) PUBLIC HEARING
L-27625-2C-C-N	) FIRST PROCEDURAL ORDER
L-27625-VP-D-N	)
L-27625-IW-E-N	)

This First Procedural Order (Order) sets forth the Presiding Officer's decisions with respect to Petitions for Leave to Intervene and sets a date for the first pre-hearing conference in this matter.

1. On October 13, 2017, the Maine Department of Environmental Protection (Department) accepted as complete for processing an application submitted by Central Maine Power Company (CMP) for a *Natural Resources Protection Act* (NRPA) permit pursuant to 38 M.R.S. §§ 480-A – 480-JJ and a *Site Location of Development Act* (Site Law) permit pursuant to 38 M.R.S. §§ 481 – 490.

2. Pursuant to the Department's *Rule Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2 § 7(B)), on November 17, 2017 the Commissioner determined that a public hearing will be held on this permit application. The Commissioner designated Christina Hodgeman, an employee of the Department, as the Presiding Officer for the purpose of carrying out the hearing on the application.

PETITIONS FOR LEAVE TO INTERVENE

3. On June 27, 2018, the Presiding Officer issued a notice setting July 19, 2017 as the deadline to submit petitions for leave to intervene in this licensing matter.

4. The Maine Administrative Procedure Act provides that a petition for leave to intervene will be granted if the petition shows that the petitioner is a person who is or may be substantially and directly affected by the licensing proceeding, or is a member of a class which is or may be substantially and directly affected by the licensing proceeding, or is

an agency of federal, state, or local government. 5 M.R.S. § 9054(1). The Department has discretion to allow other petitioners to intervene as a full or limited party to the proceeding. 5 M.R.S. § 9054(2).

5. The Department received 23 petitions for intervenor status. On July 24, the Presiding Officer requested more information from four petitioners. On July 31, three of those intervenors provided the appropriate information to meet the requirements and one, the Sierra Club, withdrew its petition.

6. The following is a summary of the entities that petitioned the Department to intervene on this matter along with their concerns, listed in the order they were received:

    a. The Old Canada Road National Scenic Byway is a non-profit organization interested in the National Scenic Byway in the project area. The organization asserts that travelers on their road segments would be impacted by the visual effects of the project.

    b. Mr. Ed Buzzell is a business owner in Moxie Gore. Mr. Buzzell asserts that the project will be visible to him and his guests at his Lodge on the Moxie Road. He also expressed concerns about environmental harm from the proposed project.

    c. The City of Lewiston asserts that the project would substantially and directly affect the City given that CMP is proposing to construct a direct to alternating current converter station within the City and install new lines and upgrade existing transmission lines within the community.

    d. The Friends of Boundary Mountains is a non-profit organization that works to safeguard the Boundary Mountains. The organization asserts that there should be more discussion on the proposed mitigation plan, impacts on tourism and recreation at the Kennebec Gorge and Appalachian Trail (AT), impacts and effects of the new corridor proposed to be cut through the wildlife habitat of the Boundary Mountains.

    e. The Appalachian Mountain Club (AMC) is a non-profit organization that promotes the protection of natural resources in the northeast. AMC members use the Kennebec River Gorge and the AT for recreation. They are interested in the scenic aspects of the proposed project, the Gorge crossing, conservation and management of the proposed new corridor, and best practical mitigation techniques for this proposed project.

    f. The Western Mountains & Rivers Corporation (WM&RC) is a non-profit organization with a board comprised of interested persons who have first-hand knowledge of the aesthetic and environmental importance of the Kennebec

Gorge region and surrounding areas. WM&RC is interested in the environmental, natural resource, aesthetic, recreational, economic and community impact the proposed project would have on this area.

g. Nextera Energy Resources, LLC (Nextera) is a limited liability company that owns renewable generating projects in the immediate vicinity of the project. Nextera asserts that it has concerns about buffering, impacts to natural resources, practicability of the project location, alternative location impacts and the project impact on Nextera.

h. Hawk's Nest Lodge is a small business in West Forks, Maine that hosts year-round recreational guests. Hawk's Nest Lodge asserts concerns with visual impacts, appropriateness of environmental mitigation, impacts to brook trout habitat, and visual impacts at the Kennebec River Gorge crossing.

i. The Industrial Energy Consumer Group (IECG) is a group interested in diversification of the sources of energy and lowering the cost of energy in New England. IECG is interested in addressing the issues of existing uses of resources, scenic character, air and water quality. They also assert that there are no reasonable and practicable alternatives to the proposed project.

j. The Natural Resources Council of Maine (NRCM) is a non-profit organization dedicated to protection of Maine's environment. NRCM is interested in addressing potential visual impacts, impacts to streams, impacts to wildlife and habitat among other environmental concerns.

k. The Town of Caratunk asserts that the visual impacts and the crossings of the Kennebec River along with other significant river segments by this proposed project will affect their community.

l. The Maine State Chamber of Commerce is a non-profit organization that advocates on behalf of business interests. The Chamber would like to address the following issues, and assert its views as follows: that the project would have no unreasonable effect on scenic, aesthetic, recreational or navigational uses of resources; no reasonable alternative for the project exists; and the project would result in no adverse effect on the natural environment.

m. The International Brotherhood of Electrical Workers (IBEW) is a labor organization which states that it has many employees who would be affected by this project. IBEW asserts that there would be no unreasonable interference with existing scenic, aesthetic, recreational or navigation uses of resources; no reasonable alternative for the project exists; and adequate buffering has been proposed.

n. Ms. Ashli Coleman of West Forks, Maine, states that she would be directly impacted by the project. Ms. Coleman asserts that her concerns are relative to the site development and the Kennebec River Gorge crossing.
o. Maine Guide Services, LLC is a business operating in Caratunk, Maine and operating in the Forks, West Forks and Caratunk. This business is concerned with the visual impacts and the Kennebec River Gorge crossing.

p. Brookfield White Pine Hydro, LLC owns the Federal Energy Regulatory Commission (FERC) licensed hydropower project area involved in the alternatives proposed by CMP. Brookfield asserts that there is no practicable alternative to the proposed project that would be less damaging to the environment.

q. Trout Unlimited is a national conservation organization whose mission is to conserve, protect, and restore North America's trout and trout watersheds. Trout Unlimited asserts its interests in the impacts of the project on habitat for cold water fish from construction and maintenance activities; adequate buffering areas around crossed waterbodies; and visual impacts to the Kennebec River Gorge crossing for those using the river for recreational purposes recreation.

r. Mr. Chris Russell represents Kennebec River Angler located within the proposed project area in Caratunk, Maine. Mr. Russell asserts the project affects native brook trout habitat and is also concerned with the visual impacts on the Kennebec River Gorge crossing.

s. The Nature Conservancy (TNC) is a non-profit organization dedicated to natural resource conservation. TNC asserts concerns with siting of the proposed project, impacts to wildlife species, and habitat effects of the proposed project.

t. Maine Wilderness Guides Organization is a non-profit organization that speaks on behalf of the professional wilderness guides. The organization asserts its concerns with potential impacts on habitat provided by the streams and rivers, potential impacts to deer wintering areas, and potential scenic impacts on recreational use.

u. The Conservation Law Foundation (CLF) is a non-profit environmental advocacy organization. CLF would like to address and provide its assessments of potential environmental and natural resource impacts, and scenic impacts.

v. Mr. Mike Pilsbury of Caratunk, Maine is a Maine Guide and business owner in the project area. Mr. Pilsbury asserts concerns with potential impacts on river crossings and mitigation issues. Mr. Pilsbury submitted a petition after the

deadline; however, the Presiding Officer allowed the petition to be considered as it was submitted less than one hour after the deadline.

7. The 22 entities or persons listed above have met the requirements for Intervenor status set forth in Chapter 3§11 (A)(1) and all petitions are approved. A list of Intervenors and contact information can be found in Appendix C.

8. All Intervenors are expected to comply with deadlines and filing requirements established by the Presiding Officer. Failure to comply may result in appropriate sanctions, including the rejection of argument, evidence or testimony the party seeks to offer.

EX PARTE COMMUNICATION

9. No person, Intervenor or party may communicate directly or indirectly with the Commissioner or Presiding Officer concerning any issue of fact, law or procedure, except upon notice and opportunity for all parties to participate. This bar on ex parte communications does not prohibit the Commissioner and Presiding Officer from having the aid and advice of counsel and Department staff and does not apply to communications between the Commissioner or Presiding Officer and counsel or Department staff.

ADDITIONAL MATTERS

10. If they have not already, each Intervenor must designate one person as the contact person for the purpose of this proceeding. All filings related to this matter should be sent to Jim Beyer (contact information below) and the persons on the service list must be copied. The service list along with contact information can be found in Appendix C.

11. The Presiding Officer provides that any communications in this matter may be filed with the Department by electronic mail (email). Once an email communication has been sent to the members on the service list, service is deemed complete. Any person who does not readily have access to email and wishes to receive documents by U.S. mail in paper form, instead of email, may request that form of service.

12. The Department has established a listing for this project on its website at http://www.maine.gov/dep/land/projects/necec/index.html. The application and supporting materials, as well as significant filings by other persons, including the Intervenors will be posted on this site.

13. The Department requested certain necessary additional information from CMP pertaining to the application. Some of the requested information has been submitted; however, the Department is awaiting certain requested information from CMP including, but not limited to, the following:

    a. Northern Bog Lemming and Roaring Brook Mayfly habitat assessment results. Sampling to confirm the presence of these organisms will be done in September if there is suitable habitat that may be impacted.

    b. Historic site and archeological management summary.

    c. Updated natural resources maps.

    d. Total impact numbers for freshwater wetland and vernal pool impacts as well as the calculations for payment of fees as part of the proposed mitigation.

    e. A mitigation plan for impacts to cold water fisheries and other protected natural resources.

    f. Survey results for unusual natural areas and rare plants.

14. The applicant has represented that it will submit this information CMP by **August 13, 2018.** The Department will review the information submitted and post it to the project website at: http://www.maine.gov/dep/land/projects/necec/index.html.

15. If a person wishes to intervene on this matter as a result of any information submitted in response to those requests after the original deadline for filing a petition for Intervenor status, the Presiding Officer will approve new petitions that meet the requirements under Ch. 3 which demonstrate they are substantially and directly affected by those matters.

PRE-HEARING CONFERENCE

16. A pre-hearing conference will be held on **Friday, September 7, 2018 at 10:00 a.m.** in Room 118 (Door D7 entrance) of the Marquardt Building, 32 Blossom Lane, Augusta, Maine. All parties must have a representative in attendance at the conference. Any Intervenor not present waives its right to object to matters discussed and resolved by way of a procedural order following the conference. Members of the public may attend the conference, but may not otherwise participate.

17. For convenience of the applicant, the Intervenors, and the public, this conference, subsequent meetings, a portion of the public hearing and at least one public comment session will be held jointly with the Maine Land Use Planning Commission (the

Commission). The Commission will be considering whether the proposed project meets its separate criteria; however, due to the overlap of some issues and required analysis, the administrative procedures will occur jointly to some extent.

18. The purpose of the public hearing is for the Department to collect additional information for the record to help inform a licensing decision, for the public to have the opportunity to participate more directly by submitting oral testimony, and having the opportunity to cross examine witnesses. Due to the large scope of this project, time at the hearing cannot be devoted to all of the statutory criteria this proposed project must meet in order to obtain the sought after permits. Not all of the statutory criteria are of equal interest to the Intervenors and members of the public. The Department does not envision a need to hear live testimony and questioning for all of the statutory criteria. Therefore, at the pre-hearing conference, the Presiding Officer will discuss narrowing of scope of hearing to the statutory criteria and topics which are the most significant and contentious. Even though the hearing may be focused on only a few of the licensing criteria, the applicant will be required to meet all of the statutory criteria, and the regulatory requirements under the statutes, in order for the permits to be granted. Intervenors and any member of the public may submit written comments on those criteria that are not the subject of the hearing until the close of the record at the end of the hearing.

19. To begin the process of narrowing the issues that will be addressed at the hearing, by **Monday, August 27, 2018**, the Intervenors must submit the following: a specification of the statutory and regulatory criteria that they wish to address at the public hearing; the specific, significant or contentious topics or subject matters under those criteria relating to the project that they wish to address; and whether the Intervenor is generally in favor of, or against a permit being issued for the proposed project, or neither for nor against the proposed project being permitted. The parties should be mindful that the limited hearing time should be devoted to an in-depth examination of the issues most likely to elicit conflicting evidence or technical testimony that warrants a closer examination than could be had on documents alone. Intervenors may request additional time if review of certain additional information identified in paragraph 13 of this order is necessary for making these submissions. The list of statutory and regulatory criteria the Department will be considering for this project can be found in Appendix B.

20. Consolidation of Intervenors will also be discussed at the pre-hearing conference. The Presiding Officer may limit participation to one representative per party. The Presiding Officer will likely consolidate Intervenors with substantially similar interests or contentions. Intervenors are strongly encouraged to consolidate voluntarily if they have substantially similar interests. If parties plan to consolidate voluntarily, they must notify the Department by **Monday, August 27, 2018**.

LICENSING FILE

21. The full licensing file will be maintained at the Department's Eastern Maine Regional Office located at 106 Hogan Road, Bangor, Maine and will be available for public inspection upon request and with reasonable notice. Requests to examine the licensing file may be directed to Jim Beyer at Jim.Beyer@maine.gov or at (207) 446-9026.

Dated: August 13, 2018



Christina Hodgeman
Presiding Officer

APPENDIX A: LIST OF MUNICIPALITIES, TERRITORIES AND COUNTIES IN THE PROJECT AREA

Municipalities:	Townships/Plantations:	Counties:
Alna	Appleton Township	Androscoggin
Anson	Beattie Township	Cumberland
Auburn	Bald Mountain Township	Franklin
Caratunk	Bradstreet Township	Kennebec
Chesterville	Concord Township	Lincoln
Cumberland	Hobbstown Township	Sagadahoc
Durham	Johnson Mountain Township	Somerset
Embden	Lowelltown Township	
Farmington	Parlin Pond Township	
Greene	Skinner Township	
Industry	T5 R7 BKP WKR	
Jay	The Forks Plantation	
Leeds	West Forks Plantation	
Lewiston		
Livermore Falls		
Moscow		
New Gloucester		
New Sharon		
Pownal		
Starks		
Whitefield		
Wilton		
Windsor		
Wiscasset		
Woolwich		

APPENDIX B: RELEVANT REVIEW CRITERIA

These excerpts from applicable statutes and regulations are provided to aid the parties as they determine which criteria and topics they will request be addressed during the public hearing. The parties are strongly urged to review the complete statutes and regulations as they prepare their requests and prepare for the hearing.

Site Location of Development Law
Applicable Licensing Criteria

From 38 M.R.S. § 484.

1. Financial capacity and technical ability. The developer has the financial capacity and technical ability to develop the project in a manner consistent with state environmental standards and with the provisions of this article.

3. No adverse effect on the natural environment. The developer 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, air quality, water quality or other natural resources in the municipality or in neighboring municipalities.

A. In making a determination under this subsection, the department may consider the effect of noise from a commercial or industrial development.

H. In making a determination under this subsection regarding a development's effects on significant vernal pool habitat, the department shall apply the same standards applied to significant vernal pool habitat under rules adopted pursuant to the Natural Resources Protection Act.

4. Soil types. The proposed development will be built on soil types that are suitable to the nature of the undertaking.

5. Ground water. The proposed development will not pose an unreasonable risk that a discharge to a significant ground water aquifer will occur.

6. Infrastructure. The developer 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.

7. Flooding. 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.

9. Blasting. Blasting will be conducted in accordance with the standards in section 490-Z, subsection 14, unless otherwise approved by the department.

Regulation Interpreting the Site Location of Development Act:

Chapter 375: NO ADVERSE ENVIRONMENTAL EFFECT STANDARDS OF THE SITE LOCATION OF DEVELOPMENT ACT

This regulation describes the scope of review of the Department in determining a developer's compliance with the "no adverse effect on the natural environment" standard of the Site Location Law (38 M.R.S. § 484(3)).

1. No Unreasonable Adverse Effect on Air Quality
2. No Unreasonable Alteration of Climate
3. No Unreasonable Alteration of Natural Drainage Ways
4. No Unreasonable Effect on Runoff/Infiltration Relationships
5. Erosion and Sedimentation Control
6. No Unreasonable Adverse Effect on Surface Water Quality
7. No Unreasonable Adverse Effect on Ground Water Quality
8. No Unreasonable Adverse Effect on Ground Water Quantity
9. Buffer Strips
10. Control of Noise
11. Preservation of Historic Sites
12. Preservation of Unusual Natural Areas
13. Access to Direct Sunlight
14. No Unreasonable Effect on Scenic Character
15. Protection of Wildlife and Fisheries
16. Adequate Provision for Solid Waste Disposal
17. Adequate Provisions for the Control of Odors

Natural Resources Protection Act
Applicable Licensing Criteria

From 38 M.R.S. § 480-D.

1. Existing uses. The activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses.

2. Soil erosion. The activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

3. Harm to habitats; fisheries. The activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

In determining whether there is unreasonable harm to significant wildlife habitat, the department may consider proposed mitigation if that mitigation does not diminish in the vicinity of the proposed activity the overall value of significant wildlife habitat and species utilization of the habitat and if there is no specific biological or physical feature unique to the habitat that would be adversely affected by the proposed activity. For purposes of this subsection, "mitigation" means any action taken or not taken to avoid, minimize, rectify, reduce, eliminate or compensate for any actual or potential adverse impact on the significant wildlife habitat.

4. Interfere with natural water flow. The activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

5. Lower Water Quality. The activity will not violate any state water quality law, including those governing the classification of the State's waters.

6. Flooding. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

8. Outstanding river segments. If the proposed activity is a crossing of any outstanding river segment as identified in section 480-P, the applicant shall demonstrate that no reasonable alternative exists which would have less adverse effect upon the natural and recreational features of the river segment.

Chapter 310: WETLANDS AND WATER BODIES PROTECTION

This rule interprets the Natural Resources Protection Act as it applies to the alteration of a coastal wetland, great pond, freshwater wetland, river, stream, or brook.

5. General Standards.

A. Avoidance. The activity will be considered to result in an unreasonable impact if the activity will cause a loss in wetland area, functions, or values, and there is a practicable alternative to the activity that would be less damaging to the environment. The applicant shall provide an analysis of alternatives (see Section 9(A)) in order to demonstrate that a practicable alternative does not exist.

B. Minimal Alteration. The amount of wetland to be altered must be kept to the minimum amount necessary.

C. Compensation. Compensation is the off-setting of a lost wetland function with a function of equal or greater value. The goal of compensation is to achieve no net loss of wetland functions and values. Every case where compensation may be applied is unique due to differences in wetland type and geographic location. For this reason, the method, location and amount of compensation work necessary is variable.

D. No Unreasonable Impact

(1) Even if a project has no practicable alternative and the applicant has minimized the proposed alteration as much as possible, the application will be denied if the activity will have an unreasonable impact on the wetland. "Unreasonable impact" means that one or more of the standards of the Natural Resources Protection Act, 38 M.R.S. § 480-D, will not be met.

Chapter 315: ASSESSING AND MITIGATING IMPACTS TO EXISTING SCENIC AND AESTHETIC USES

This regulation interprets the Natural Resources Protection Act criterion and describes the process for evaluating impacts to existing scenic and aesthetic uses resulting from activities in, on, over, or adjacent to protected natural resources subject to the Natural Resources Protection Act, pursuant to 38 M.R.S. § 480-D(1).

4. Scope of Review. The potential impacts of a proposed activity will be determined by the Department considering the presence of a scenic resource listed in Section 10, the significance of the scenic resource, the existing character of the surrounding area, the expectations of the typical viewer, the extent and intransience of the activity, the project purpose, and the context of the proposed activity. Unreasonable adverse visual impacts are those that are expected to unreasonably interfere with the general public's visual enjoyment and appreciation of a scenic resource, or those that otherwise unreasonably impair the character or quality of such a place.

8. Mitigation. In the case where the Department determines that the proposed activity will have an adverse visual impact on a scenic resource, applicants may be required to employ appropriate measures to mitigate the adverse impacts to the extent practicable.

9. Determination. It is the responsibility of the applicant to demonstrate that the proposed design does not unreasonably interfere with existing scenic and aesthetic uses, and thereby diminish the public enjoyment and appreciation of the qualities of a scenic resource, and that any potential impacts have been minimized.

Chapter 335: SIGNIFICANT WILDLIFE HABITAT

This regulation interprets the Natural Resources Protection Act criterion on significant wildlife habitat. It applies to an activity that takes place in, on, or over a significant wildlife habitat, or adjacent to a significant wildlife habitat contained within a freshwater wetland.

3. General standards

A. Avoidance. An activity that 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, will be considered to have an unreasonable impact if there is a practicable alternative to the project that would be less damaging to the environment.

B. Minimal alteration. Alteration of the habitat and disturbance of subject wildlife must be kept to the minimum amount necessary by, among other methods, minimizing the size of the alteration, the duration of the activity, and its proximity to the significant wildlife habitat and subject wildlife.

C. No unreasonable impact. Even if the activity has no practicable alternative, and the applicant has minimized the proposed alteration as much as possible, the application will be denied if the activity will have an unreasonable impact on protected natural resources or the subject wildlife. "Unreasonable impact" means that one or more of the standards of the NRPA at 38 M.R.S. § 480-D will not be met. In making this determination, the department considers the area of the significant wildlife habitat affected by the activity, including areas beyond the physical boundaries of the project and the cumulative effects of frequent minor alterations of significant wildlife habitats.

D. Compensation. Compensation is the off-setting of a lost habitat function with a function of equal or greater value. The goal of compensation is to achieve no net loss of habitat functions and values. Every case where compensation may be required is unique due to differences in habitat type and geographic location. For this reason, the method, location, and amount of compensation work necessary is variable.

APPENDIX C: SERVICE LIST

Organization	Name of Spokesperson	Email address
INTERVENORS		
Old Canada Road National Scenic Byway	Bob Haynes	oldcanadaroad@myfairpoint.net
none	Ed Buzzell	ebuzzel@hotmail.com
City of Lewiston	Ed Barrett	ebarrett@lewistonmaine.gov
Friends of the Boundary Mountains	Robert Weingarten	bpw1@midmaine.com
Appalachian Mountain Club	David Publicover	dpublicover@outdoors.org
Western Mountains & Rivers Corp.	Ben Smith/Russell Walters	Benjamin.Smith@SoltanBass.com
NextEra Energy Resources, LLC	Joanna Tourangeau, Brian Murphy	JTourangeau@dwmlaw.com
Hawk's Nest Lodge	Peter Dostie	hawksnestlodge@gmail.com
Industrial Energy Consumer Group	Anthony Buxton	ABuxton@preti.com
Natural Resources Council of Maine	Sue Ely	sely@nrcm.org
Town of Caratunk	Elizabeth Caruso	caratunkselectmen@myfairpoint.net
Maine State Chamber of Commerce	Dana Connors	Amorin@mainechamber.org
IBEW Local 104	Tim Burgess	burgess@ibew104.org
Town of West Forks	Ashli Coleman	ashli.goodenow@gmail.com
Maine Guide Service, LLC	Greg Caruso	gcaruso@myfairpoint.net
Brookfield Renewable	Nicolas Bosse	Nicolas.Bosse@brookfieldrenewable.com
Trout Unlimited	Jeff Reardon	Jeffrey.Reardon@tu.org
Kennebec River Angler	Chris Russell	info@kennebecriverangler.com
The Nature Conservancy	Rob Wood	robert.wood@TNC.ORG
Maine Wilderness Guides Organization	Nick Leadley	leadley@myfairpoint.net
Conservation Law Foundation	Phelps Turner,	pturner@clf.org
Kennebec River Angler	Mike Pilsbury	mspils15@hotmail.com

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