TECHNICAL REVIEW MEMORANDUM

Bureau of Land Resources

TO:  **Jim Beyer, Project Manager – Bureau of Land Resources**

FROM:  **Kerem Gungor, Environmental Engineer-- Bureau of Land Resources**

RE:  **Central Maine Power Company, New England Clean Energy Connect, L-27625-26-A-N**

DATE: **February 21, 2019**

I have reviewed the submittals delivered to the Department in response to my technical review memorandum dated 12/21/18 on the proposed *New England Clean Energy Connect (NECEC)* project.

**APPLICANT:** CMP

**DEP#:** L-27625-26-A-N

**Primary Contact for the Applicant:** Gerry Mirabile

**Project description:** NECEC which mainly includes transmission line construction and improvements, substation improvements, construction of one new converter station, one new substation, and two termination stations.

**Resultant impervious area[[1]](#footnote-1):** 13.09 ac

**Resultant developed area[[2]](#footnote-2):** 19.37 ac

**Standards applicable to the project:** Basic, flooding, general, phosphorus, discharge to wetlands, and redistribution of stormwater discharges.

1. **STORMWATER SUBMITTALS**

The applicant submitted one portable document file (PDF) in response to my technical review memorandum dated 12/21/2018 in January, 2019 and the PDF is accessible from <https://www.maine.gov/dep/ftp/projects/necec/response-comments/2019-01-25%20Response%20to%20comments/> :

* 2019-01-28\_NECEC Response to MDEP 12\_2018 Stormwater Review Memo.pdf: 113-page document that includes:
	+ Response letter dated 1/25/19, signed by *Gerry J. Mirabile*, CMP Environmental Projects Manager.
	+ Attachment A. MDEP Technical Review Memorandum – December 2018.
	+ Attachment B. Section 14. Basic Standards (Revised January 16, 2019).
	+ Attachment C. 315641-SW-2 Rev-0.0C, 315641-SW-4 Rev-0.0C, 315641-C-4 Rev-0.0C.
		- 315641-SW-2 Rev-0.0C. Post-development Watershed Plan West Forks Station. Revised 1/16/19
		- 315641-SW-4 Rev-0.0C. Post-development Watershed Plan Moxie Gore Station. Revised 1/16/19
		- 315641-C-4 Rev-0.0C. Grading & Restoration Plan West Forks. Revised 1/15/19

The above plan sheets were signed and sealed by *Ricky A. Young, P.E.* on 1/16/19.

* + Attachment D. Level Spreader, Buffer Sizing, and Culvert Sizing Calculations.
		- W432-002-001 Rev-0.0B. General Arrangement Plan West Forks Term. Sta.
		- E432-002-001 Rev-0.0B. General Arrangement Plan Moxie Gore Term. Sta.

The above plan sheets were not signed or sealed.

* + Attachment E. 1076-003-002 Sheet 5, 1076-003-002 Sheet 6.
		- 1076-003-002 Sheet 5 of 6. Stormwater Treatment Plan. Revised 1/15/19
		- 1076-003-002 Sheet 6 of 6. Post-development Stormwater Plan Gravel Wetland Plan. Revised 1/16/19

The above plan sheets were signed and sealed by *Kenneth R. Volock, P.E.* on 1/16/19.

In response to my e-mail inquiries dated 2/20/19 & 2/21/19, the applicant provided the following PDF via an e-mail on 2/21/19:

* 090-271\_Merrill\_Rd\_SWMR-Rev\_E.pdf: 181-page “Stormwater Management Report” revised January 2019, signed and sealed by *Kenneth R. Volock, P.E.* on 1/16/19 including:
	+ Introduction; basic, general, and flooding standards; conclusion sections
	+ Plan sheets:
		- 1076-003-002 Sheet 3 of 6. Pre-development Stormwater Plan. Revised 8/9/18.
		- 1076-003-002 Sheet 4 of 6. Post-development Stormwater Plan. Revised 1/15/19.
	+ Appendices A thru C: BMP inspection & maintenance checklists and logs, letter from MEDEP to CMP, and stormwater calculations.

# STORMWATER MANAGEMENT

*Central Maine Power Company (CMP)* hasprovided the full-text of the amended “Section 14. Basic Standards” of the application with the revision date of 1/16/19. Should the revised project be approved, the project personnel including the contractors, CMP inspectors, and the third-party inspectors shall be required to follow the best management practices described in the revised Section 14.

1. **General Standards**

*West Forks Termination Station*

The applicant will treat the proposed (new) 15-ft wide, 461-ft long gravel access road using a meadow buffer as shown in *315641-SW-2 Rev-0.0C* plan sheet. Entire impervious area associated with the proposed road will be treated by the buffer which will have a 30-ft stone bermed level lip spreader (see *315641-C-6 Rev0-0B* plan sheet). The proposed treatment meets the 75/50% impervious/developed area treatment exception outlined for the linear portion of the projects under Chapter 500 Section 4(C)(5)(c). The self-treating impervious surface (i.e. the proposed yard to be built per the CMP substation yard specifications approved by the Department) will be approximately 18,300 sf. The proposed drainage swales will not be mowed more than once a year (see *Section 12.8.2.1* & *Appendix 12-3* in *NECEC Kennebec River Horizontal Directional Drill* submittal dated 10/19/18); thus, these areas are not classified as landscaped/developed areas per Chapter 500 Section 3.

*Moxie Gore Termination Station*

The applicant will treat the proposed (new) 15-ft wide, 238-ft long gravel access road using a forested buffer as shown in *315641-SW-4 Rev-0.0C* plan sheet. Entire impervious area associated with the proposed road will be treated by the buffer which will have a 30-ft stone bermed level lip spreader (see *315641-C-6 Rev0-0B* plan sheet). The proposed treatment meets the 75/50% impervious/developed area treatment exception outlined for the linear portion of the projects under Chapter 500 Section 4(C)(5)(c). The self-treating impervious surface (i.e. the proposed yard to be built per the CMP substation yard specifications approved by the Department) will be approximately 18,300 sf. The proposed drainage swales will not be mowed more than once a year (see *Section 12.8.2.1* & *Appendix 12-3* in *NECEC Kennebec River Horizontal Directional Drill* submittal dated 10/19/18); thus, these areas are not classified as landscaped/developed areas per Chapter 500 Section 3.

*Merrill Road Converter Station*

The applicant has revised the proposed gravel wetlands in response to my technical comments (see *1076-003-002 Sheets 5 & 6 of 6*). The proposed gravel wetlands will treat 78.7 and 54.9% of the linear impervious and developed area, respectively, which meets the minimum requirements set forth in Chapter 500 Section 4(C)(5)(c). The proposed self-treating substation yard and grassed underdrained soil filter (GUSF) will treat 99.33 and 83.75% of the resultant non-linear impervious and developed area, respectively.

1. **Flooding Standard**

*Moxie Gore Termination Station*

The applicant has demonstrated that the proposed 18-inch corrugated metal pipe (CMP) culvert can handle the peak flows generated by the 10- and 25-yr, 24-h storms (see *Attachment D* in the response PDF dated 1/28/19).

*Merrill Road Converter Station*

The applicant has provided the routing diagram for the post-development hydrologic model. I have reviewed the peak flows reported for the analysis points (or outfalls) A and C (see *Proposed Conditions Hydraulic Summary* table in *1076-003-002 Sheet 4 of 6*) and verified their accuracy using the peak flows given in *Link Summary* output of the model. Overall, the post-development peak flows remain below the pre-development peak flows as required by the standard.

1. **Overall Review of the Project**

The applicant shall follow the amended Section 14 of the application packet which includes “*Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects* (*Revised 6/29/2018)”* for the construction and maintenance of the NECEC project (see the full-text of the amended Section 14 in *2019-01-28\_NECEC Response to MDEP 12\_2018 Stormwater Review Memo.pdf*).

Following post-construction (permanent) stormwater treatment measures will be used at the proposed stations:

* Merrill Road Converter Station (Lewiston): one grassed underdrained soil filter, two gravel wetlands
* Fickett Road Substation (Pownal): one grassed underdrained soil filter
* Termination Station (West Forks): one meadow buffer with stone bermed level lip spreader
* Termination Station (Moxie Gore): one forested buffer with stone bermed level lip spreader

The station yards will be constructed per the specifications given in the Department’s letter dated 6/5/2008 and signed by *Don Witherill* and considered as “self-treating” impervious surfaces.

The revised project complies with the applicable Chapter 500 standards; hence, I recommend for its approval with the following conditions:

1. Prior to the construction, the applicant shall provide a construction plan for Segment 1 higher erosion risk areas including the construction timetable, access roads to be used in the construction, contractor, erosion and sedimentation control crew, environmental inspector and third-party inspector information for the Department’s review and approval,
2. The applicant shall monthly provide the Department a plan showing disturbed and stabilized areas within the higher erosion risk sections of Segment 1 during the construction,
3. Horizontal Directional Drilling (HDD) at the Kennebec River Crossing:
	1. No less than three months before the tentative HDD start date, the applicant shall submit a site-specific inadvertent fluid release prevention, monitoring, and contingency plan satisfying all the criteria given in Exhibit 14-1 of the HDD application packet for the Department’s review and approval,
	2. The applicant shall retain the services of a Department-approved third-party inspector to oversee the HDD,
	3. An on-site pre-construction meeting shall be held with the attendance of the Department-approved third-party inspector, the representatives of the Department, applicant, and HDD contractor.
4. The applicant shall retain the services of a professional engineer to inspect the construction and stabilization of all stormwater management structures to be built for Merrill Road converter station, Fickett Road substation, and the termination stations in West Fork and Moxie Gore. If necessary, the inspecting engineer will interpret the construction plans for the contractor. Once all stormwater management structures are constructed and stabilized, the inspecting engineer will notify the department in writing within 30 days to certify that the structures have been completed per the approved plans. Accompanying the engineer’s notification must be a copy of the test results for any soil fill or aggregates and specifications of the materials used in the construction of the structures and a log of the engineer’s inspections giving the date of each inspection, the time of each inspection, and the items inspected on each visit.
5. Prior to the construction, the applicant shall register the stormwater buffers of the termination stations at the Somerset County Registry of Deeds and permanently mark them on the ground.
1. Proposed transmission line work and existing substation improvements will not create jurisdictional impervious area. Therefore, the given resultant impervious area figure is the total figure for the two new substations and two new underground transmission termination stations: 3.90 ac for Fickett Road substation; 7.15 ac (substation pad) + 0.96 ac (access road) for Merrill Road substation; 0.50 ac for Moxie Gore station; 0.58 ac for West Forks station. [↑](#footnote-ref-1)
2. Proposed transmission line work and existing substation improvements will not create jurisdictional developed area. Therefore, the given resultant developed area figure is the total figure for the two new substations and two new underground transmission termination stations: 10.71 ac (substation pad) + 2.71 ac (access road) for Merrill Road substation; 4.87 ac (total) for Fickett Road substation; 0.50 ac for Moxie Gore station; 0.58 ac for West Forks station. [↑](#footnote-ref-2)