



MAINE POWER RELIABILITY PROGRAM

A CENTRAL MAINE POWER COMPANY PROGRAM

FRANKFORT, MAINE SHORELAND ZONING AND FLOOD HAZARD DEVELOPMENT APPLICATIONS

Transmission Line Construction:

**Segment 3 - Section 203 Rebuild and
New Section 3023**

**Segment 1 - Section 388 Rebuild and
New Sections 254 and 3023**

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MAINE POWER RELIABILITY PROGRAM

**FRANKFORT SHORELAND ZONING AND FLOOD HAZARD DEVELOPMENT
APPLICATION MATERIALS**

The project described in these application materials is located, in part, within Frankfort’s shoreland zone and in part within Frankfort’s flood hazard areas (100 year flood plain). Those portions of the project within these areas require approval under the Frankfort Shoreland Zoning Ordinance and the Frankfort Floodplain Management Ordinance. The application materials include a general description of the Maine Power Reliability Program (MPRP) proposal for the entire town, but focus on those portions within shoreland zone and flood hazard areas, and the applicable requirements of these ordinances.

The application materials are organized into four sections. Section I describes the MPRP in general, including transmission line upgrades that are proposed in the Town of Frankfort. This information provides context for specific project elements that are proposed within the Town’s shoreland zone and flood hazard areas.

Section II of the application addresses project elements and requirements related specifically to the Town’s Shoreland Zoning Ordinance; while Section III addresses project elements and requirements related specifically to the Town’s Floodplain Management Ordinance.

Some information required for the Shoreland Zoning application is also required for the Flood Hazard Development application. Examples of information required for both applications include: proof of CMP’s right, title or interest to the transmission line corridors and CMP’s environmental guidelines for construction. Section IV of the application (“Standard Exhibits”) includes information that is required for both applications.

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SECTION I

PROJECT DESCRIPTION

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Maine Power Reliability Program Description

The Maine Power Reliability Program (MPRP) is a project by Central Maine Power Company (CMP) to upgrade Maine's bulk power system. The vast majority of Maine's bulk power transmission system was placed into service in the early 1970s and is now reaching the limits of its ability to meet the growing electrical demand of Maine customers. Since the last major transmission infrastructure was completed more than 30 years ago, the patterns of both available generation and customer load have shifted significantly. For example, population has become more concentrated in the southern part of the State, while the generation needed to serve that load is now more distant and dispersed. When these pattern changes are combined with the increasing peak demand, the current transmission infrastructure in Maine will, in very few years, become inadequate. In addition, the reliability and security standards mandated by law and administered by the North American Electric Reliability Corporation (NERC), the Northeast Power Coordinating Council, Inc. (NPCC), and ISO New England (ISO-NE) have changed significantly in recent years. Central Maine Power Company must upgrade its bulk power system with this proposed project in order to meet the mandatory standards and to provide reliable electric service to Maine customers into the future.

CMP's 345 kV transmission system was built and put into service in 1971. Since then power consumption has more than doubled. In recent years, both CMP and ISO-NE have identified certain reliability issues with the 345 kV system that need to be addressed.

In January of 2007, as part of the MPRP, CMP began a comprehensive needs assessment of its bulk power transmission system. The study included a 10-year forecast to evaluate the system in Maine, including a review of system reliability and performance under various system conditions and operating scenarios, as well as a needs assessment to ensure a reliable transmission system in the most cost-effective manner possible. The study identified a number of significant reliability issues with Maine's bulk transmission system, including insufficient 345 kV transmission capacity, insufficient 115/345 kV transformation capacity, and insufficient transmission support and/or infrastructure in all regions served by CMP.

After completing the needs assessment, the MPRP team went to work to study possible solutions. This included both transmission and non-transmission alternatives, before designating its preferred solution.

CMP ultimately selected a primarily transmission solution (a small geographic area know as the South Portland loop will be addressed through non-transmission alternatives) based on a number of factors, including electrical performance, cost effectiveness, impacts to landowners, and Maine's environment under various forecasts of future conditions. The proposed solution consists of a network of 345 kV and 115 kV transmission lines and associated substations throughout CMP's service territory where particular needs were identified. The proposed transmission solution ranges from Eliot in the south, Rumford in the west, Warren and Searsport in the east, and Orrington and Pittsfield in the north (Figure I-1). In all, the MPRP will encompass nearly 80 Maine towns, and will require approvals from the Maine Public Utilities Commission, the Maine Department of Environmental Protection (MDEP), the U.S. Army Corps of Engineers, and numerous municipalities. The proposed upgrades in Frankfort, outlined below, are a part of the MPRP and intended to help improve the reliability, safety, and security of the bulk power transmission system in Maine, while at the same time meeting the increasing demands for electrical power.

MPRP Project Description in Frankfort

Currently, there are two transmission line corridors in Frankfort. For identification purposes, these corridors are broken into “segments” and each segment is given its own identification number. One of the corridors in Frankfort runs southeast approximately 4.5 miles from Monroe to Prospect. The approximately one mile portion of this corridor that runs from the Frankfort/Monroe town line to an intersection with another corridor near Meadow Brook Tributary is known as Segment 3. The second corridor in Frankfort runs approximately 6.5 miles northeast from Monroe to Winterport. The portion of this corridor north of the corridor intersection near Meadow Brook Tributary is known as Segment 1; the portion of this corridor south of the intersection is known as Segment 4. (See Figure I-2.)

Presently, within each of these three segments there is a single transmission line. These lines are identified by section number:

- Section 203, operating at 115kV, runs along Segment 3; and
- Section 388, operating at 345kV, runs along Segments 1 and 4.

The existing transmission lines include approximately 114 pole structures, generally two-pole wooden H-Frames that typically are 45 feet tall along Section 203 and 75 feet tall along Section 388. (Pole height is measured in feet above ground (AG).)

As part of the Maine Power Reliability Program, CMP proposes to construct two additional transmission lines in Frankfort using the same corridors at their present width or at an expanded width:

- New Section 254 will operate at 115kV and run 6.5 miles northeast from Monroe to Winterport along corridor Segments 1 and 4, sharing the corridor with the existing Section 388.
- New Section 3023 will operate at 345kV and run about 1 mile southeast from Monroe along corridor Segment 3, sharing the corridor with Section 203. New Section 3023 will then turn northeast and run approximately 4.5 miles along corridor Segment 1 to Winterport, sharing the corridor with the existing Section 388 and proposed Section 254.

The proposed transmission lines (Section 254 and Section 3023) will include approximately 117 pole structures and have a greater variety of structure types, notably more single pole structures, than the existing lines.

Figure I-2 illustrates the location of existing and proposed transmission lines. Exhibit G, Transmission Line Configuration Cross-Sections, illustrates the range of typical structures types that will be used in Frankfort.¹

¹ The project described above, depicted in Shoreland Zoning Exhibit 3 and Flood Hazard Development Exhibit 5 and illustrated in Standard Exhibit G, reflects the current design of the MPRP upgrades proposed in Frankfort. Along a portion of Segment 1, if CMP is able to acquire additional property and widen the corridor by 100 feet, CMP will use double-pole H-Frame structures to carry Sections 254 and 388, as opposed to taller, single-pole structures. Cross-sections #2 and #3 in Standard Exhibit G show the current design with the single-pole structures. If CMP is able to widen the corridor, the cross-section #2 design would replace the cross-section #3 design. For shoreland zoning, the potential change is immaterial: under either alternative, structure types and locations in the shoreland zone remain the same. Similarly, for floodplain management, the potential change is insignificant. Under either scenario, as noted in the Flood Hazard Development application, the project fully satisfies the requirements of the Floodplain Management Ordinance. In these application materials CMP seeks approval of both alternatives.

To achieve the alignments needed to accommodate multiple transmission lines within in a single corridor, some modifications to the existing corridors and transmission lines will be required. These modifications include widening corridors through acquisition of additional land; removing some existing pole structures and rebuilding them at new locations in the corridor; adding new pole structures; and using structure types that can be placed closer together within the corridor.

Development Description by MPRP Project Segment

A description of the MPRP project development in Frankfort by segment follows:

Segment 1 encompasses the corridor that will have three transmission lines. It extends 4.5 miles from its intersection with Segments 3 and 4 near Meadow Brook Tributary to the Frankfort/Winterport town line at Marsh Stream near the railroad crossing. Proposed development in this segment includes:

- expanding the corridor on the south side by widths varying from 100 feet near Meadow Brook Tributary to 248 feet near the Marsh Stream crossing;
- removing about 2.25 miles of the existing Section 388 345kV line and rebuilding it near the center of the corridor;
- constructing the new Section 254 115kV line on the north side of the corridor; and
- constructing the new Section 3023 345kV line on the south side of the corridor.

Segment 1 now includes 40 pole structures in a 270 foot wide corridor. When the MPRP project is completed, this corridor will include 127 pole structures (+87) in a corridor that varies from 270 feet to 518 feet in width. See Exhibit G, Cross-Sections #2, #3 and #4.²

Segment 3 encompasses a corridor that will have two transmission lines: approximately 1 mile of existing transmission line Section 203 and new transmission line Section 3023. Segment 3 extends from its intersection with Segments 4 and 1 near Meadow Brook Tributary to its crossing of Marsh Stream at the Frankfort/Monroe town line. Proposed development in this segment includes:

- removing about 1 mile of the existing Section 203 115kV line and rebuilding it on the north side of the corridor; and
- constructing the new Section 3023 345kV line on the south side of the corridor.

This portion of Segment 3 now includes 13 pole structures in a 218 foot wide corridor. When the MPRP project is completed, this corridor will include 23 pole structures (+10) in the existing corridor. See Exhibit G, Cross-Section #1.

(The MPRP does not include any changes within the 3.5 mile portion of the existing corridor that runs from the intersection of Segments 1, 3, and 4 to the Frankfort/Prospect town line.)

Segment 4 encompasses a corridor that will have two transmission lines: existing transmission line Section 388 and new transmission line Section 3023. It extends about 2 miles from its intersection with Segments 3 and 1 near Meadow Brook Tributary to its crossing of the Monroe town line west of Town Farm Hill. Proposed development in this segment includes:

² This design could vary slightly if CMP is able to acquire additional land along portions of the existing corridor. (See footnote 1 above.)

- rebuilding a small portion (<700 feet) of the existing Section 388 345kV line; and
- constructing the new Section 254 115kV line on the north side of the corridor.

Segment 4 now includes 18 pole structures in a +/- 270 foot wide corridor. When the MPRP project is completed, this corridor will include 38 pole structures (+20) in the existing corridor. See Exhibit G, Cross-Section #5.

Related work required to carry out these improvements in all three segments includes:

- clearing of woody vegetation within CMP’s existing and expanded corridors that is capable of growing into the transmission line clearance zone (“capable species”)
- construction of temporary equipment access ways needed to install pole structures and conductors; and
- excavation and backfilling associated with the installation and of pole structures.

The work schedule for transmission line improvements in Frankfort is highly dependent on securing all necessary permits and contracts and coordinating the construction in Frankfort with other work on this line. At this time, work on the entire MPRP project is expected and be completed in 2013.

MPRP project development falls within only four areas governed by Frankfort’s Shoreland Zoning and Floodplain Management ordinances, which are the focus of these application materials. See Table I-1, below. As illustrated in this table, none of the work within Segment 4 is within either the shoreland zone or floodplain management area.

Table I-1. MPRP Project Areas Governed by Frankfort Shoreland Zoning and Floodplain Management Ordinances		
MPRP Segment	Shoreland Zoning	Floodplain Management
Segment 3	1. Within 250 feet of Marsh Stream at the Frankfort/Monroe town line	1. Marsh Stream 100-year floodplain at the Frankfort/Monroe town line
Segment 1	2. Within 75 feet of Meadow Brook Tributary	2. Meadow Brook Tributary 100-year floodplain
	3. Within 75 feet of Meadow Brook	3. Meadow Brook 100-year floodplain ³
	4. Within 250 feet of Marsh Stream at the Frankfort/Winterport town line	4. Marsh Stream 100-year floodplain at the Frankfort/Winterport town line
Segment 4	None	None

³ If CMP is able to widen the Segment 1 corridor between Meadow Brook and Loggin Road by 100 feet, CMP will use H-Frame structures to carry Section 254 and Section 388, as opposed to taller, single pole structures. Cross-section diagrams #2 and #3 in Standard Exhibit G show the current design, which includes use of the single-pole structures. If CMP is able to widen the corridor, the cross-section #2 design would replace the cross-section #3 design. If this occurs and H-Frame structures are used instead of single-poles, the type and location of poles in the floodplain around Meadow Brook will change. Under either alternative, however, no poles would be located within the shoreland zone on either side of the Brook.

SECTION II

SHORELAND ZONING APPLICATION

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Exhibit 1. MPRP Shoreland Pole Structure Information	End of Section
Exhibit 2. MPRP Shoreland Pole Structure Dimensions	“
Exhibit 3. Site Plan, Maps 1-4	“

APPLICATION FOR A PERMIT

Date: _____

The undersigned applies for a permit for the following use, said permit to be issued on the basis of the information contained within this application. The applicant hereby certifies that all information and attachments to this application are true and correct.

1. Applicant

Name Central Maine Power Company
Address 83 Edison Drive
Augusta, Maine Zip Code 04336
Telephone 207-626-4006

2. Owner

Name Central Maine Power Company
Address 83 Edison Drive
Augusta, Maine Zip Code 04336
Telephone 207-626-4006

3. Address or location of property (describe or indicate on a map) See Supplemental Information and Exhibit 3, Site Plan

4. Existing use of property Electric power transmission lines

5. Property is zoned as Limited Residential and Stream Protection Districts

6. Is property part of a subdivision? Yes _____ No X

7. Proposed use(s)

- a) Residence
- b) Accessory building
- c) Pier or dock (Temporary _____ Permanent _____)
- d) Clearing for approved construction _____
- e) Private sewage disposal system _____
- f) Filling or other earth-moving activity of less than 10 cubic yds _____ more than 10 cubic yds _____
- g) Other (explain) Essential services: electric power transmission lines

8. Type of sewage disposal (existing n/a proposed n/a)

9. Percentage of lot to be occupied by structures Minimal; see Supplemental Information.

10. Lot width _____ lot depth _____ lot area _____ N/A; see Supplemental Information.

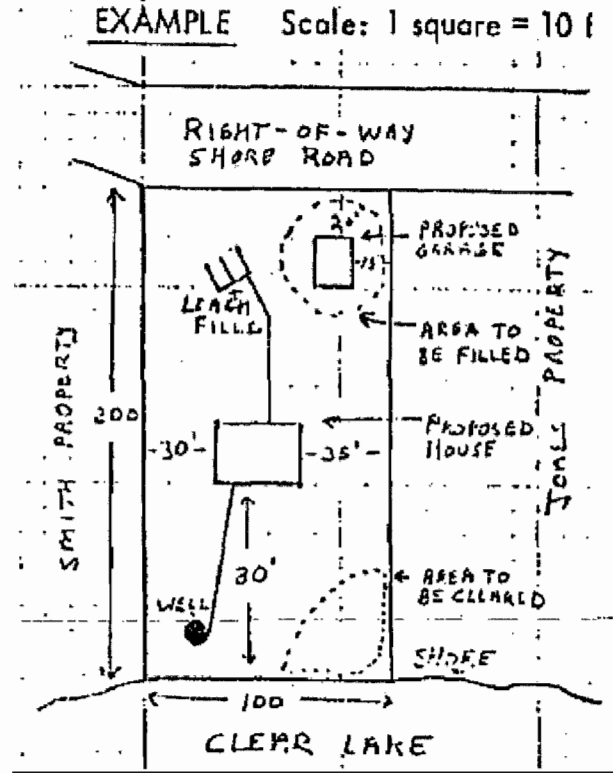
11. Structures-exterior dimensions (length and width) See Exhibits 1 and 2.

- a) Residence _____ by _____ Number of stories _____
- b) Garage _____ by _____
- c) Other _____ by _____ Number of stories _____

12. Site Plan. Illustrate the following information about your lot and the proposed use of the lot on a scale drawing or by a site plan prepared by a surveyor, architect, or engineer (use of graph paper as in the diagram to the right is recommended):

- a) Lot dimensions.
- b) Names of abutting property owners, name and location of abutting rights of way, public and private, and abutting water body.
- c) Exact location of existing and proposed buildings and distance of each from nearest lot line.
- d) Location of sewage disposal system and water supply.
- e) Areas to be cleared, if applicable.
- f) Areas of cut, fill, grading, or other earth moving activity, if applicable.

See Supplemental Information & Exhibits.



13. Attachments

- a) Attach a copy of Plumbing Permit n/a
- b) Attach a copy of official decisions (or note pending applications) of other Federal, State, or local agencies regarding the use of this property (Site Location Permit, Minimum Lot Size waiver, Subdivision approval, Great Ponds Permit, etc.) See Standard Exhibit F.
- c) On a separate sheet, attach any supplemental information, or explain any points you feel need clarification. See Supplemental Information.

To the best of my knowledge, all information submitted on this application is true and correct. All proposed uses will be in conformance with the application and the Frankfort Shoreland Zoning Ordinance (zoning ordinance)

Signature Cynthia A. Bastey Date Aug. 3, 2009

(For official use only – maintain as permanent record)

Date Received _____ Fee Paid _____
 Date of Action on Application _____ Approved _____ Denied _____
 If application denied, reason for denial _____

If approved, the following conditions and safeguards were prescribed: _____

Code Enforcement Officer (if applicable) _____
 Planning Board (if applicable) _____

Shoreland Zoning Application Form Supplemental Information

9 &10. Lot dimensions and percent coverage by structures.

Transmission line corridors are not typical building lots. CMP corridors often are hundreds of feet in width and extend for many miles. A single corridor or lot may cross more than one shoreland district. Within Frankfort, after the proposed transmission line upgrades, the corridor will range from 218 to 518 feet in width. The MPRP upgrades will take place in approximately 7.5 miles of corridor. Less than 100 square feet (approximately 88 square feet) of area within the shoreland zone will be occupied by utility pole structures.

Table II-1. Structure Coverage by Shoreland Zoning District	
Shoreland Zoning District	Sq. Ft. Occupied by Structures
Marsh Stream Limited Residential District at Monroe Town Line	38*
Meadow Brook Tributary Stream Protection District <i>South Shore</i>	0
Meadow Brook Tributary Stream Protection District <i>North Shore</i>	0
Meadow Brook Stream Protection District <i>South Shore</i>	0
Meadow Brook Stream Protection District <i>North Shore</i>	0
Marsh Limited Residential District at Winterport Town Line	50**

*One new single pole and one new two-pole H-Frame

**One existing two-pole H-Frame that will be rebuilt and one new two-pole H-Frame

11. Structure exterior dimensions (length and width): See Exhibits 1 and 2.

12. Site Plan.

Because the amount of information provided is substantial, not all of it will appear on the Site Plan. The following identifies where key information can be found.

- | | |
|---|---|
| a) Lot dimensions. | n/a; see discussion of corridor width and length above. |
| b) Names of abutting property owners, name and location of abutting rights of way, public and private, and abutting water body. | Standard Exhibit E, Abutting Owners and Lots |
| c) Exact location of existing and proposed buildings and distance of each from nearest lot line. | No buildings are proposed. The location of transmission poles is identified in: Tables II-3 through II-6; Exhibit 3, Site Plan; Standard Exhibit G, Cross Sections. |
| d) Location of sewage disposal system and water supply. | n/a |
| e) Areas to be cleared, if applicable. | Tables II-3 through II-6; Exhibit 3, Site Plan; |
| f) Areas of cut, fill, grading, or other earth moving activity, if applicable. | Tables II-3 through II-6; Exhibit 3, Site Plan |

Project Development in Shoreland Zoning Districts

Frankfort’s Shoreland Zoning Ordinance and Map

The Frankfort Shoreland Zoning Ordinance is the State of Maine Guidelines for Municipal Shoreland Zoning Ordinances as amended through May 1, 2006 and adopted by the Town in March of 2009. The Town of Frankfort Shoreland Zoning Map is the map adopted by the Town in 1994, which remains in effect until a revised zoning map is prepared by the Town and approved by the Department of Environmental Protection. The Shoreland Zoning Map shows that the Stream Protection District extends 75 feet from the protected resource and the Limited Residential District extends 250 feet from the protected resource. These are the two shoreland zoning districts within Frankfort that are crossed by the MPRP.

Permitted Land Uses

Under Frankfort’s Shoreland Zoning Ordinance (the “Ordinance”), electric power transmission lines are included in the definition of “essential services” (Ordinance Section 17). Specifically, transmission lines fall within the category of other essential services, which, as established in the Table of Land Uses (Ordinance Section 14), are permitted in all districts with the approval of the Planning Board.

Shoreland Zoning Districts the MPRP Will Cross

The MPRP will cross two shoreland zoning districts in four locations in Frankfort, illustrated on Figure II-1, MPRP Crossings of Frankfort Shoreland Zoning Districts.

- the 250 foot Limited Residential District on Marsh Stream at the Frankfort/Monroe Town Line and on Marsh Stream at the Frankfort/Winterport Town Line; and
- the 75 foot Stream Protection District on both shores of Meadow Brook Tributary and Meadow Brook.

The following table summarizes the proposed development in each shoreland district.

Table II-2. MPRP Development Summary by Zoning District			
Shoreland Zoning District	New/Rebuilt Pole Structures	Clearing of Vegetation	Temporary Access Ways
1. Marsh Stream Limited Residential District (250’) at the Frankfort/Monroe Town Line	2 structures (3 poles in total)	yes	yes
2. Meadow Brook Tributary Stream Protection District (75’)	0	yes	no
3. Meadow Brook Stream Protection District (75’)	0	yes	no
4. Marsh Stream Limited Residential District (250’) at the Frankfort/Winterport Town Line	1 structure (2 poles in total)	yes	yes

Proposed MPRP Development in Frankfort by Shoreland Zoning District

Proposed development in Shoreland Zoning Districts is shown in Exhibit 3, Site Plan, Maps 1 through 4 and Standard Exhibit G, Transmission Line Configuration Cross-Sections.

1. Marsh Stream Limited Residential District (250') at the Frankfort/Monroe Town Line
(Exhibit 3, Map1)

The CMP corridor (Segment 3) within 250 feet of Marsh Stream now includes one transmission line (Section 203) operating at 115 kV, which is characterized by two-pole wooden structures (H-Frames) that are typically 45 feet in height above ground. There is currently one H-Frame structure within the Limited Residential District. This line will be removed and rebuilt on the north side of the corridor using single-pole wooden structures that are typically 75 ft. in height above ground. The rebuilt line will include one single-pole structure located in the Limited Residential District

A second transmission line (Section 3023) operating at 345kV will be constructed in approximately the same location as the removed Section 203 line. The new transmission line pole structures will be two-pole, H-Frame wooden structures that are typically 75 feet in height ground. The second transmission line will include one H-Frame located within the Limited Residential District.

When the project is completed, this corridor will contain two transmission lines: the relocated and rebuilt Section 203 operating at 115kV, and the new Section 3023 operating at 345kV.

Table II-3. MPRP Development in Marsh Stream Limited Residential District at Frankfort/Monroe Town Line	
Corridor Expansion:	None
Pole Structures to be Removed	#203-311: Two-pole, wood. Setback from stream = 143 ft.
New pole structures:	<ul style="list-style-type: none"> • #203-286: Single pole, wood. Height = 74.5 ft. above ground. Setback from stream = 140 ft. • #3023-398: Two-pole H-Frame, wood. Height = 79 ft. above ground... Setback from stream = 140 ft.
Clearing of Trees:	A strip from 20' to 80' wide on the north side of the corridor between the currently cleared area and the corridor boundary : 0.30 acres
Temporary Access Ways:	A temporary access way on the south side and center of the corridor: 280 ft. in length

2. Meadow Brook Tributary Stream Protection District (75') (Exhibit 3, Map 2)

The CMP corridor (Segment 1) within 75 feet of Meadow Brook Tributary now includes one transmission line (Section 388) operating at 345kV located near the center of the corridor. The transmission line spans the Stream Protection District but no pole structures are located within the district.

A second transmission line (Section 254) operating at 115kV will be constructed north of the existing line within the limits of the existing corridor.

A third transmission line (Section 3023) operating at 345kV will be constructed south of the existing line and requires the corridor width to be expanded by 100’.

When the project is completed, the CMP corridor will contain three transmission lines that span the Stream Protection District, but no pole structures will be located within the district.

Table II-4. MPRP Development in Meadow Brook Tributary Stream Protection District	
Corridor Expansion:	Yes. 100’ additional width on south side.
Pole Structures to be Removed	None
New pole structures:	None
Clearing of trees:	A narrow strip on the north side of the corridor between the existing transmission line and the gas pipeline; and a strip 100’ wide on the south side of the corridor between the current cleared area and the expanded corridor boundary. Approximately 0.5 acres.
Temporary Access Ways:	None

3. Meadow Brook Stream Protection District (75’) (Exhibit 3, Map 3)

The CMP corridor (Segment 1) within 75 feet of Meadow Brook now includes one transmission line (Section 388) operating at 345kV and located on the south side of the corridor. This line will be removed and rebuilt near the center of the corridor.

A second transmission line (Section 254) operating at 115kV will be constructed on the north side of the existing corridor.

A third transmission line (Section 3023) operating at 345kV will be constructed on the south side of the existing corridor in approximately the same location as the removed Section 388.

When the project is completed, the existing corridor will contain three transmission lines that span the Stream Protection District, but no pole structures will be located within the district.

Table II-5. MPRP Development in Meadow Brook Stream Protection District	
Corridor Expansion:	None
Pole Structures to be Removed	None
New pole structures:	None
Clearing of trees:	An area of trees located south of Meadow Brook, approximately 0.08 acres.
Temporary Access Ways:	None

4. Marsh Stream Limited Residential District (250') at Frankfort/Winterport Town Line
(Exhibit 3, Map 4)

The CMP corridor (Segment 1) in this district now includes one transmission line (Section 388) operating at 345kV located near the center of the corridor and characterized by two-pole H-frame wooden structures that are typically 75 feet in height above ground. There is currently one pole structure located within the Limited Residential District. This transmission line and structure line will remain in place.

A second transmission line (Section 254) operating at 115kV will be constructed north of the existing line and within the limits of the existing corridor. This second transmission line will result in one additional H-Frame located within the Limited Residential District.

A third transmission line (Section 3023) operating at 345kV will be constructed south of the existing line. The corridor will be expanded by 248' to accommodate the new line. No new pole structures associated with this transmission line will be added within this shoreland area.

When the project is completed, the expanded CMP corridor will contain three transmission lines and include one existing and one new pole structure within the Limited Residential District.

Table II-6. MPRP Development in Marsh Stream Limited Residential District at Frankfort/Winterport Town Line	
Corridor Expansion	Yes. 248' additional width on south side
Pole Structures to be Removed	None
New pole structures:	#254-400: Two-pole, wood. Height = 103 ft. above ground. Setback from stream = 135 ft.
Clearing of trees:	A strip 85' wide on the north side of the corridor between the current cleared area and the corridor boundary; and a strip from 85' to 135' wide on the expanded corridor between the railroad and the stream, approximately 1.6 acres.
Temporary Access Ways:	A temporary access way on the north side of the corridor, approximately 180' in length

Shoreland Zoning Land Use Standards

Section 15 of the Frankfort Shoreland Zoning Ordinance contains the Land Use Standards discussed in this part of the application. As described below, the project proposed by CMP satisfies each of these standards.

A. Minimum Lot Standards

Not applicable.

B. Principal and Accessory Structures

Not applicable.

C. Piers, Docks, Wharfs, Bridges, etc.

Not applicable.

D. Campgrounds

Not applicable.

E. Individual Private Campsites

Not applicable.

F. Commercial and Industrial Uses

Not applicable.

G. Parking Areas

There will be no parking areas associated with the project.

H. Roads and Driveways

There will be no new permanent roads or driveways associated with the project. CMP has historically maintained points of access to and access ways within its corridors for use by its own vehicles for periodic routine and emergency maintenance of the corridor and transmission facilities. This practice will continue.

Temporary equipment access ways, which are not considered roads or driveways and which do not add impervious surface area, will be established for use during the construction period.

Exhibit 3, Maps 1-4 illustrate the temporary access ways proposed for this project.

Temporary access ways will be established for general access to the corridor for construction purposes. These temporary access ways will be in place for more than one growing season, but will be removed once all aspects of construction in that area are complete. Temporary access routes to individual pole sites will be in place for no more than one growing season. Areas where soils have been disturbed will then be mulched with hay. Vegetation will be allowed to re-establish itself once the temporary access ways have been removed.

Measures will be taken to avoid and minimize the impact of access ways on streams and wetlands through the use of crane mats, temporary bridges, geo-textile fabrics, and culverts, when necessary. Appropriate erosion controls will be installed. There will be no routine grubbing (removal of root systems) within wetland crossings; however, occasional root removal and minor grading may be required to ensure mat stability and construction access safety. Such grading will be performed on a limited basis and only with prior approval by CMP's environmental representatives. Streams that are too wide to cross with crane mats or temporary bridges will be avoided.

Access ways will be installed in accordance with Standard Exhibit H, CMP's "*Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects*," which provides greater detail about construction methods and practices used to meet Land Use Standards that apply to the project.

I. Signs

There will be no signage associated with the project.

J. Storm Water Runoff

The permanent conversion of vegetated areas to impervious surfaces along the corridor will be limited to the transmission line poles themselves. There will be no significant storm water run-off generated from the project. All new construction will be designed to minimize storm water run-off from the site in excess of the natural pre-development conditions.

Clearing of vegetation elsewhere in corridor will be limited to the removal of mature trees and capable species, as necessary, to allow placement of pole structures and to ensure adequate clearance between any vegetation and the conductors. The removal of understory vegetation and ground cover will occur only as needed to install a structure, to create access to the corridor, and for puller/tensioner sites. Restoration activities following construction are designed to return site contours to pre-construction conditions and to ensure that areas disturbed during construction will be revegetated as required by CMP's *Environmental Guidelines*.

Clearing of mature trees and capable species will alter the vegetative cover type in some areas of the transmission line corridor. After construction, the corridor will be allowed to revegetate with shrubs and a variety of broad and narrow-leaved herbaceous vegetation as is typical of transmission corridors. Generally, the conversion of a forest cover to a scrub-shrub or early successional cover type within a transmission line corridor may improve the ability of the land to absorb runoff due to the increased density of the root mass associated with the resultant vegetative cover. Vegetation along the corridor will be maintained every 4-6 years to promote this "brush" type of cover.

K. Septic Waste Disposal

Not applicable.

L. Essential Services

(1) Where feasible, the installation of essential services shall be limited to existing public ways and existing service corridors (Ordinance Section 15(L) (1)).

A guiding principle in the design of the MPRP transmission line upgrades has been to utilize the existing transmission line corridors to the maximum extent practicable. The location of new transmission lines within or adjacent to existing corridors, as opposed to the creation of new corridors, has multiple benefits, including minimizing the impacts to communities, individual property owners, and the environment.

Installation of the new transmission lines in Frankfort will occur entirely within existing CMP corridors or adjacent to existing corridors on abutting land recently acquired for that purpose.

(2) Installation of essential services is not permitted in a Resource Protection or Stream Protection District, except to provide services to a permitted use within said district, or except where the applicant demonstrates that no reasonable alternative exists. Where permitted, such structures and facilities shall be located so as to minimize adverse impacts on surrounding uses and resources, including visual impacts. (Ordinance Section 15(L) (2))

The new transmission lines will cross two Stream Protection districts in Frankfort: one on Meadow Brook Tributary (north and south shores) and one on Meadow Brook (north and south shores). There will be no new pole structures in these districts. Creation of a new corridor that would avoid this district is not reasonable given the cost and impact of creating a new corridor as opposed to running the new lines within or alongside an existing corridor. Notably, not only has CMP opted for co-location of the new lines, but this practice is favored by Ordinance Section 15(L)(1) discussed above.

M. Mineral Exploration and Extraction

Not applicable.

N. Agriculture

Not applicable.

O. Timber harvesting.

Not applicable.

P. Clearing of Vegetation for Development

Clearing to allow for the development of permitted uses is allowed in the Limited Residential and Stream Protection districts. (Ordinance Section 15 P (2)).

Exhibit 3, Maps 1-4 illustrate the areas to be cleared for this project.

Removal of woody plant species that are capable of growing tall enough to reach within the required clearance distance between the conductors and vegetation is essential to ensure the reliability and safe operation of the transmission line. Due to the sag in the height above ground of electric transmission lines between poles, which varies with the distance between poles, tension on the wire, electrical load, air temperature and other changing conditions, the required reliability clearances are typically achieved by removing all capable species.

In general, all trees and saplings of capable species and some tall shrubs are cut to ground level. Root systems are left in place. All slash (i.e., limbs, tree trunks, wood chips, etc.) from the cutting operation is disposed of in accordance with the Maine Slash Law (12 M.R.S.A. § 9333). The remaining vegetation is typically scattered growth of small shrubs of non-capable species and herbaceous plants.

The temporary removal of other understory vegetation and ground cover will occur only as needed to install a utility pole structure, to create access to the corridor, and for puller/tensioner sites. (Infrequently, it may also be necessary to remove mature “danger trees” that are large enough and positioned so that they could fall into the conductors.)

After construction is completed, non-capable species will be allowed to grow back in to ensure that the corridor is vegetated, which prevents erosion and provides wildlife habitat. Over a relatively short period of time (generally within one calendar year), the newly cleared portions of the corridors will exhibit the early-successional habitat type that is typical of existing transmission line corridors in Maine. Vegetation along the corridor will be maintained every 4-5 years to promote this “brush” type of cover.

Q. Erosion and Sedimentation Control

Except for the immediate area at the base of pole structures, there is no permanent increase in impervious surface area associated with the transmission line. The amount of ground disturbance associated with the MPRP project will be limited to areas of tree clearing, the immediate sites of pole placement and temporary equipment access routes needed to carry out the project.

CMP's written soil erosion and sedimentation control plan, the *Environmental Guidelines* (Standard Exhibit H), is used on all transmission line projects. The guidelines include specifications for the installation and implementation of soil erosion and sedimentation control measures by CMP personnel, their representatives and contractors. The guidelines provide a single, cohesive set of erosion control specifications for the MPRP. The goals of these measures contained in the guidelines are to minimize soil movement and loss, preserve the integrity of environmentally sensitive areas, and maintain existing water quality. The guidelines were developed in consultation with the Maine Department of Environmental Protection and are largely based on DEP's *Maine Erosion and Sediment Control BMPs*, dated March 2003, and DEP's Chapter 500.

All bid packages and contracts for work performed on the MPRP will include these guidelines. CMP representatives will ensure that the procedures contained in this manual are followed by regularly inspecting all work and requiring corrective action when necessary.

R. Soils

Based on the applicant's analysis of the Soil Survey Geographic Database compiled by the United States Department of Agriculture – Natural Resources Conservation Service, soils within the transmission line corridor will accommodate the proposed MPRP construction activities. Soil constraints within the transmission line corridor will be managed and mitigated through implementation of erosion and sediment control measures, proper site and project design, and special construction procedures.

S. Water Quality

In addition to the erosion and sedimentation control measures that prevent siltation of waters, CMP observes restrictions on the use of fuels and herbicides within transmission corridors. To minimize spill potential during construction, no fueling or maintenance of vehicles will be performed within 100 feet of wetlands, streams or other sensitive natural resources.

After construction, the transmission line corridor is maintained to encourage the growth of scrub-shrub vegetation, and vegetation species that are capable of growing up into the conductors must be removed for safety and reliability reasons. CMP uses a selective herbicide program to treat areas once every 4-5 years to maintain an early successional stage of growth. Herbicide is selectively applied (using a low-pressure backpack applicator) to capable species to prevent growth (or re-growth of a cut plant) of individual plants. CMP does not use herbicides within 25 feet of any waterbody or wetland with standing water.

Crew forepersons are certified by the Maine Pesticide Control Board, and all herbicides are EPA registered. The selective use of herbicides within the transmission line corridor does not pose a threat to groundwater quality.

T. Archaeological and Historic Resources

Following consultation with the Maine Historic Preservation Commission (MHPC), CMP conducted extensive investigations of potential pre-historic and historic archaeological sites and historic architectural sites along the entire project corridor that may be eligible for the National Register of Historic Places (NRHP). No NRHP-eligible sites were found in the Frankfort shoreland zoning districts crossed by the MPRP project.

Shoreland Zoning Approval Criteria

The Shoreland Zoning Ordinance contains nine approval criteria, each of which is discussed in this part of the application. (Ordinance Section 16 (D)) As is discussed below, CMP's project satisfies all of these requirements.

The proposed use will:

1. Maintain safe and healthful conditions

The proposed project will maintain the same safe and healthful conditions that are already present in the transmission line corridors. The corridors and the structures within them are maintained to established industry standards so as to ensure the safety of utility workers and the general public. Maintaining sufficient clearances around the conductors is paramount to the safe operation of the line. These clearances are achieved through appropriate siting of the structures themselves and through the vegetation maintenance practices as described in this application. All construction will be in accordance with CMP's transmission standards, general industry standards, and "Good Utility Practice," including all necessary live line working clearances, strength factors, and reliability factors as governed by the National Electrical Safety Code (NESC). In all instances, the line will be designed to meet or exceed the NESC and other standards, as applicable. The transmission line and all facilities will be operated in full compliance with CMP safety standards, which fully comply with Federal Occupational Safety & Health Administration requirements.

A health concern that is sometimes expressed revolves around the electric and magnetic fields produced by transmission lines. These fields are produced by any electric equipment or anything that carries electric current. The World Health Organization and numerous other scientific agencies around the world have studied the issue extensively. These studies have been unable to establish that electric and magnetic fields produced by transmission lines such as those being proposed as part of the MPRP cause any adverse health effects. There is no scientific basis to project any adverse health effects as a result of the electric and magnetic fields produced by transmission lines associated with this project.

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

Because of the standards and practices CMP employs in the construction and maintenance of transmission lines, described above and in the *Environmental Guidelines*, the transmission line project will not result in water pollution, erosion, or sedimentation of surface waters.

3. Adequately provide for the disposal of all wastewater.

There will be no wastewater disposal required for this project.

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

Adverse impacts to fish and wildlife habitat are avoided principally through the use of existing corridors or expansions of existing corridors. In general, given the existing landscape characteristics of the sites, construction and maintenance of the project is not expected to create conditions that are not already common to the project area. It is fully anticipated that local wildlife populations will adapt and respond to any additional alterations much as they already do to ongoing land uses within the vicinity of the proposed project. Therefore, impacts to wildlife are expected to be minimal to non-existent.

Stream habitats for the following species have been identified in Frankfort. As explained below, these habitats will not be adversely impacted by the proposed project.

Rare Mussels

Two species of rare mussels have been documented in Marsh Stream in Winterport near the railroad crossing: the brook floater (*Alasmidonta varicosa*), a State listed Threatened species, and the creeper (*Strophitus undulatus*), a State Species of Special Concern. Marsh Stream at this location provides suitable habitat for both species, and an area 2700' in diameter around this point is designated a Department of Inland Fisheries and Wildlife (DIF&W) Rare Species Consultation Zone. The Consultation Zone includes the MPRP transmission line upgrades that are proposed in the Limited Residential District at this location. Consultation with DIF&W will continue throughout the federal and state environmental permitting process to determine if additional measures are required to protect these populations. No poles will be placed in Marsh Stream and nearest poles added as part of the MPRP will be over 100 feet from the stream. The same conditions that exist today and allow these mussels to thrive will continue to exist after the installation of the new lines. The MPRP will not adversely affect these mussels.

Fisheries

Marsh Stream, Meadow Brook and Meadow Brook Tributary, which are crossed by the MPRP, are identified as supporting warmwater and coldwater fisheries. Marsh Stream also provides habitat for anadromous fish, notably Atlantic salmon.

To minimize any potential for negative impacts to stream habitat and fisheries, CMP proposes to allow shoreline vegetation to remain in place to the extent practicable and install appropriate sedimentation controls in accordance with the *Environmental Guidelines*.

Streams will be spanned by the transmission line, and no poles will be located within the stream channels. No poles will be installed within 100 feet of any of these water bodies, and only minimal tree removal is proposed.

Vegetation maintenance adjacent to streams will consist of removing only those tree species that are capable of growing into the conductor safety zone during the next maintenance cycle (typically 4 to 5 years) and that are greater than 8 to 10 feet tall (capable species). Otherwise, stream side vegetation will not be disturbed during construction or during future maintenance activities, and stream buffers will continue to function in a similar manner as before construction. Future maintenance activities in these areas will consist of hand removal of those capable species that are likely to encroach on the conductor safety zone within the next 4 to 5 years.

The use of herbicides will not be allowed within 25 feet of streams or wetlands with open water. No refueling of equipment will occur in or within 25 feet of a protected natural resource or identified critical habitat area or other areas of special significance as identified by the Maine Department of Environmental Protection (MDEP), MDIF&W or the Maine Natural Areas Program (MNAP).

Atlantic Salmon

All waters currently or historically accessible to Atlantic salmon in New England are considered Essential Fish Habitat (EFH) for Atlantic salmon. The Gulf of Maine Distinct Population Segment (DPS) of Atlantic salmon is also a federally-listed endangered species. The Penobscot River and its tributaries downstream from the Bangor Dam (including Marsh Stream) are included in the range of the Gulf of Maine DPS. Consultation with the National Marine Fisheries Service, the US Fish and Wildlife Service and DIF&W will continue throughout the federal and state environmental permitting process to determine if additional measures are required to protect these populations. By following the processes summarized above, the MPRP will not have an adverse impact on Atlantic salmon or Atlantic salmon habitat.

5. Conserve shore cover and visual, as well as actual, points of access to inland waters.

The proposed project will take place entirely within existing CMP corridors or adjacent to existing corridors on land acquired for the purpose. Existing corridors have been largely cleared of trees for the existing transmission lines. Uncleared portions of existing corridors and lands acquired to expand the corridors will be cleared of woody vegetation capable of growing into the conductor safety zones of the new transmission lines.

Following construction, the corridor will be maintained to promote a permanent cover of lower growing shrubs and herbaceous vegetation throughout, and tree removal within the 25 foot stream buffers will be limited to species that are capable of growing into the conductor safety zone during the next maintenance cycle (typically 4 to 5 years) and that are greater than 8 to 10 feet tall (capable species). Thus, a similar degree of shore cover to that which currently exists will be maintained. Since the corridor already contains structures of a similar nature, the proposed project will not significantly affect visual points of access to inland waters, and will have no impact on actual points of access to inland waters.

6. Protect archaeological and historic resources as designated in the comprehensive plan.

As discussed above under Archaeological and Historic Resources, surveys coordinated with the Maine Historic Preservation Commission for the MPRP project identified no National Register eligible archaeological or historic resources within Frankfort's shoreland zone.

7. Not adversely affect existing commercial fishing or maritime activities in a Commercial Fisheries/Maritime Activities district.

There is currently no such district identified on the Frankfort shoreland zoning map

8. Avoid problems associated with flood plain development and use.

The proposed transmission lines will cross four designated federal flood hazard areas in Frankfort. Six new or rebuilt transmission line pole structures will be located in FIRM zones A or AE, although none will be located in a floodway. Application for approval of minor development in these flood hazard area follows as Section III of this application package and

includes an engineer's certification that the project meets the Article VI Development Standards of the Frankfort Floodplain Management Ordinance.

9. Be in conformance with the provisions of Section 15, Land Use Standards.

As discussed above under Land Use Standards, this project complies with the applicable standards in Section 15 of the Ordinance.

Shoreland Zoning Application Exhibits

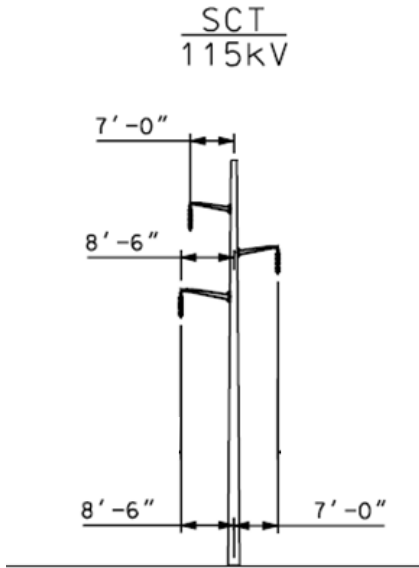
Shoreland Zoning Exhibit 1 MPRP Shoreland Pole Structure Information

SEGMENT 3: Proposed MPRP Transmission Lines with Structures in the Limited Residential (250') District on Marsh Stream at Monroe Town Line (Rebuild of Section 203 and New Section 3023)						
Pole Structure #	Structure Type	Structure Material	Height Above Ground (Ft)	Number of Structures	Requires a Foundatio n	Area of Structure (Sq Ft)
3023-398	H-Frame	Wood	79	1	No	25
203-286	Single Pole	Wood	74.5	1	No	12.6
SEGMENT 1: Proposed MPRP Transmission Line with Structures in the Limited Residential (250') District on Marsh Stream at Winterport Town Line (New Section 254)						
Pole Structure #	Structure Type	Structure Material	Height Above Ground (Ft)	Number of Structures	Requires a Foundatio n	Area of Structure (Sq Ft)
254-400	H-Frame	Wood	103	1	No	25

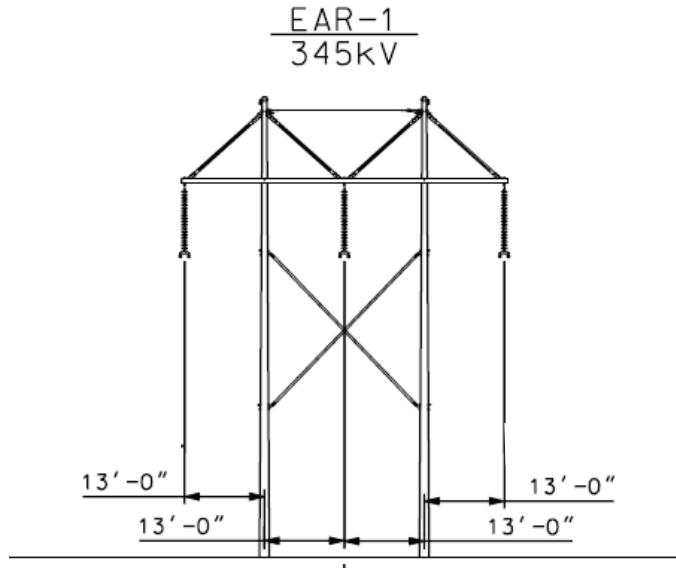
Shoreland Zoning Exhibit 2 MPRP Shoreland Pole Structure Dimensions

Marsh Stream Limited Residential District (250') at the Frankfort/Monroe Town Line

Section 203 Rebuild

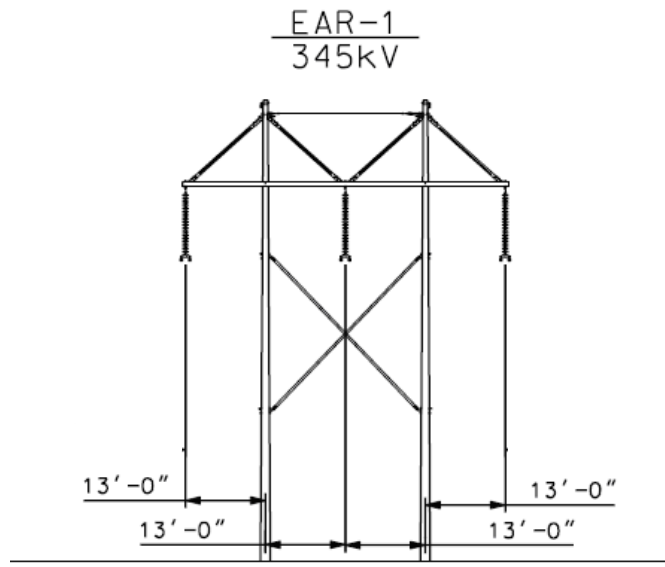


New Section 3023



Marsh Stream Limited Residential District (250') at the Frankfort/Winterport Town Line

New Section 254



**Shoreland Zoning Exhibit 3
Site Plan**

Maps 1 through 4

SECTION III

FLOOD HAZARD DEVELOPMENT APPLICATION

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Flood Hazard Development Application Form Supplemental Information	III-4
Project Development in Flood Hazard Areas	III-4
Flood Hazard Area Development Standards	III-10
Flood Hazard Development Exhibits	
Exhibit 1. MPRP Flood Hazard Area Pole Information	End of Section
Exhibit 2. MPRP Flood Hazard Area Pole Dimensions	“
Exhibit 3. Statement of MPRP Compliance with Flood Hazard Development Standards	“
Exhibit 4. Frankfort Flood Insurance Rate Maps	“
Exhibit 5. Site Plan, Maps 1 through 4	“

FLOOD HAZARD DEVELOPMENT APPLICATION

Frankfort, Maine

(All applicants must complete entire application)
[60.3(c&d)]

Application is hereby made for a Flood Hazard Development Permit as required under Article II of the Floodplain Management Ordinance of Frankfort, Maine, for development as defined in said ordinance. This permit application does not preclude the need for other municipal permit applications.

Owner: Central Maine Power Co.(CMP) c/o Mary Smith
Phone No.: 207-626-4006

Address: 83 Edison Drive, Augusta, ME 04336

Applicant: Central Maine Power Co. c/o Mary Smith
Phone No.: 207-626-4006

Address: 83 Edison Drive, Augusta, ME 04336

Contractor: To be determined
Phone No.: _____

Address: _____

LEGAL DESCRIPTION

Is this part of a subdivision? Yes No If yes, give the name of the subdivision and lot number:

Subdivision: _____ Lot #: _____

Tax Map and Lot #s: See Standard Exhibit C, Tax Map and Lot Numbers for CMP Corridors.

Address: Two CMP transmission line corridors within in the Town of Frankfort. See Supplemental Information, Figure III-1.
Street/Road Name

Zip Code: n/a
Town/Zip Code

General explanation of proposed development: The Maine Power Reliability Program (MPRP) is a project by CMP to upgrade Maine's bulk electric power system, including both 115kV and 345kV transmission lines. The project in Frankfort involves the rebuilding of existing transmission lines and the installation of new transmission lines within existing and expanded CMP corridors in the town. Six new or rebuilt transmission line poles (either single poles or H-Frames) will be located in FIRM zones A or AE. Related work in these zones includes the clearing of trees and the use of temporary equipment access ways. See Exhibit 4, Frankfort Flood Insurance Rate Maps.

Estimated Value of Proposed Development: \$ See Supplemental Information.

Proposed Lowest Floor elevation [for new or substantially improved structure]: n/a

OTHER PERMITS

Are other permits required from State or Federal jurisdictions? Yes No
If yes, are these other permits attached? Yes No Not Applicable

Federal and State Permits may include but are not limited to: ME/DEP/Natural Resource Protection Act, Site Location of Development Act, Metallic Mineral Exploration, Advanced Exploration and Mining; USACE/Section 9 &10 of the Rivers and Harbors Act/ Section 404 of the Clean Water Act; Federal Energy Regulation Commission. See Standard Exhibit F.

SEWER AND WATER

Sewage Disposal: Public Private
 Existing Proposed Not Applicable Type _____
Water Supply: Public Private

(This section to be completed by Municipal Official)

LOCATION

Flooding Source (name of river, pond, ocean, etc.):

AE Zone A1-30 Zone A Zone FRINGE FLOODWAY (1/2 width of floodplain in A Zone)

Base Flood Elevation (bfe) at the site _____ NGVD [Required for New Construction or Substantial Improvement]

Lowest floor elevation of proposed or existing structure _____ NGVD [Required for New Construction or Substantial Improvement]

If proposed development is in an AE or A1-30 Zone and cross section data is available in the Flood Insurance Study, please note the nearest cross section reference letter and elevation of base flood at nearest cross section above and below the site.

Cross Section Letter	Base Flood Elevation
Above Site _____	Above Site _____
Below Site _____	Below Site _____

Basis of unnumbered A Zone bfe determination:

- From a Federal Agency: USGS USDA/NRCS USACE Other _____
- From a State Agency: MDOT Other _____
- Established by Professional Land Surveyor
- Established by Professional Engineer HEC/RAS HEC II HY 7 TR20 TR55 Quick-2
- Other _____
- Highest Known Water Level
- Other (Explain) _____

VALUE See Supplemental Information

If the development involves work on an existing structure, enter the **Market Value** of existing structure before improvements:
\$ _____

New Construction or Substantial Improvement Minor improvement or minor addition to existing development

TYPE OF DEVELOPMENT

Check the appropriate box to the left of the type(s) of development requested and complete information for each applicable line:

- | | | | |
|---|-------------------|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> 1. Residential Structure <input type="checkbox"/> 1a. New Structure _____ <input type="checkbox"/> 1b. Add to Structure _____ <input type="checkbox"/> 1c. Renovations/repairs/maintenance _____ <input type="checkbox"/> 2. Non-Residential Structure <input type="checkbox"/> 2a. New Structure _____ <input type="checkbox"/> 2b. Add to Structure _____ <input type="checkbox"/> 2c. Renovations/repairs/maintenance _____ <input type="checkbox"/> 2d. Floodproofing _____ <input type="checkbox"/> 3. Accessory Structure _____ <input type="checkbox"/> 4. Functionally Dependent Use: <input type="checkbox"/> 4a. Dock _____ <input type="checkbox"/> 4b. Pier _____ <input type="checkbox"/> 4c. Boat Ramp _____ <input type="checkbox"/> 4d. Other _____ <input type="checkbox"/> 5. Paving _____ <input type="checkbox"/> 6. Conditional Use (Lobster/Fish Shed seaward of mean high tide) | <p>Dimensions</p> | <ul style="list-style-type: none"> <input type="checkbox"/> 7. Filling¹ _____ <input type="checkbox"/> 8. Dredging _____ <input type="checkbox"/> 9. Excavation _____ <input type="checkbox"/> 10. Levee _____ <input type="checkbox"/> 11. Drilling _____ <input type="checkbox"/> 12. Mining _____ <input type="checkbox"/> 13. Dam: Water surface to be created _____ <input type="checkbox"/> 14. Water Course Alteration _____ <input type="checkbox"/> 15. Storage of equipment or materials _____ <input type="checkbox"/> 16. Sewage Disposal System _____ <input type="checkbox"/> 17. Water Supply System _____ <input checked="" type="checkbox"/> 18. Other: Explain: <u>Installation of six new or rebuilt transmission line pole structures and associated conductors, including clearing of trees and use of temporary equipment access ways. See Supplemental Information.</u> | <p>Cubic Yards</p> <p>Number of Acres</p> |
|---|-------------------|---|---|

Note: Conditional Use requires add'l. information due to specific standards, public hearing, and Planning Board review.

¹ Certain prohibitions apply in Velocity Zones

Attach a Site Plan – Drawn to scale with north arrow. See Exhibit 5, Site Plan, Maps 1-4.

- Show property boundaries, floodway, and floodplain lines.
- Show dimensions of the lot.
- Show dimensions and location of existing and/or proposed development on the site. See also Standard Exhibit G, Cross-Sections.
- Show areas to be cut and filled.

Attach Statement – describing in detail how each applicable development standard in Article VI will be met. See Exhibit 3, Statement of MPRP Compliance with Flood Hazard Development Standards

For New Construction or Substantial Improvement also show:

- Existing and proposed grade elevations adjacent to the walls of the structure done by a Professional land Surveyor, Architect, or Engineer.
- Location and elevation of temporary elevation reference marks on the site.

Special Note:

Substantial Improvement is defined as any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement. Please refer to the floodplain management ordinance, Article XIV, for more complete definitions of New Construction and Substantial Improvement.

The applicant understands and agrees that:

- The permit applied for, if granted, is issued on the representations made herein;
- Any permit issued may be revoked because of any breach of representation;
- Once a permit is revoked all work shall cease until the permit is reissued or a new permit is issued;
- Any permit issued on this application will not grant any right or privilege to erect any structure or sue any premises described for any purposes or in any manner prohibited by the ordinances, codes, or regulations of the municipality;
- The applicant hereby gives consent to the Code Enforcement Officer to enter and inspect activity covered under the provisions of the Floodplain management Ordinance;
- If issued, the permit form will be posted in a conspicuous place on the premises in plain view; and,
- If issued, the permit will expire if no work is commenced within 180 days of issuance.

I hereby certify that all the statements in, and in the attachments to this application are a true description of the existing property and the proposed development project.

Owner: _____ Date: _____
Signature

or

Authorized Agent: Cynthia A. Bastey Date: August 3, 2009
Signature

(This section to be completed by Municipal Official)

Date: Submitted _____; Fee Paid _____; Reviewed by CEO _____; Reviewed by Planning Board _____

Permit # _____ Issued by _____ Date _____

*Flood Hazard Development Permit Application & Permit Forms For Communities with Base Flood Elevations [60.3(c&d)], Maine Floodplain Management Program, State Planning Office, <http://www.maine.gov/spo/flood/ordinances/index.htm>.

**FLOOD HAZARD DEVELOPMENT APPLICATION FORM
SUPPLEMENTAL INFORMATION**

LEGAL DESCRIPTION

Estimated Value of Proposed Development

The estimated cost of the entire MPRP is \$1.5 billion. Preliminary estimates indicate the cost of upgrades in Frankfort will be approximately \$32 million. When the MPRP is complete, CMP estimates that the installed/left in place value of the portion of the upgrades in Frankfort will be approximately \$8 million. This estimate includes the value of the rebuilt Section 203, the new Section 254, and the new Section 3023. Cost estimates for improvements to small areas, e.g. within floodplains, are not available.

TYPE OF DEVELOPMENT

Project Development in Flood Hazard Areas

Frankfort's Flood Plain Management Ordinance and Maps

Development in Frankfort's flood hazard areas is governed by the Floodplain Management Ordinance (Floodplain Ordinance) for the Town of Frankfort, Maine, Rev 6/02. Areas of Special Flood Hazard are as shown on the Flood Insurance Rate Map (FIRM) for the Town of Frankfort, Maine, effective May 17, 1990. (The MPRP transmission line segments are superimposed upon the Frankfort FIRMs in Exhibit 4.)

Minor Development

Because they are not "walled and roofed buildings," transmission line poles are not considered structures for floodplain management purposes, and they are not subject to standards that apply to structures. The proposed transmission line upgrades are considered "minor development," and are subject to ordinance standards for development. (Floodplain Ordinance, Article VIII.)

Consistent with the terminology in the Floodplain Ordinance, in this application the term pole (and not structure) is used to refer to the supports that carry the transmission lines. CMP proposes to use two types of poles in the floodplain in Frankfort, single-poles and H-Frames. H-Frames consist of two individual poles connected by cross-supports. (See Standard Exhibit G.)

Flood Hazard Areas the MPRP Will Cross

The MPRP will cross two flood hazard zones in four locations in Frankfort, illustrated on Figure III-1, MPRP Crossings of Frankfort Flood Hazard Zones.

- the A Zone on Marsh Stream at the Frankfort/Monroe town line, Meadow Brook Tributary and Meadow Brook; and
- the AE Zone on Marsh Stream at the Frankfort/Winterport town line.

The following table summarizes the work to be performed in each of the flood hazard zones.

Table III-1. MPRP Development Summary by Flood Hazard Area			
Flood Hazard Areas	New/Rebuilt Poles	Clearing of Vegetation	Temporary Access Ways
Marsh Stream A Zone at Monroe Town Line	0	yes	no
Meadow Brook Tributary A Zone	2 H-Frames	yes	yes
Meadow Brook A Zone	1 H-Frame 2 single-poles	yes	yes
Marsh Stream AE Zone at Frankfort/Winterport Town Line	1 H-Frame	yes	yes

Project Development by Flood Hazard Area

Proposed development in Flood Hazard Areas is shown in Exhibit 5 Site Plan, Maps 1 through 4.

1. Marsh Stream A Zone at Frankfort/ Monroe Town Line (Exhibit 5, Map 1)

The Marsh Stream 100 year floodplain occupies very little land in Frankfort at this location. There is currently one 115kV transmission line (Section 203) that spans the stream, and no existing poles are located in the floodplain. When the MPRP project is completed, there will be two transmission lines spanning the stream and no poles in the floodplain.

As part of the MPRP, CMP proposes to remove the existing transmission line and rebuild the line on the north side of the corridor. No poles or access ways associated with the relocated line will be located in the floodplain. There will be only minor clearing of trees (450 sq. ft.) at the shore.

CMP proposes to add a second transmission line to this corridor, Section 3023, which will operate at 345kV. No new poles or access ways will be located in the floodplain as a result of this new line.

2. Meadow Brook Tributary A Zone (Exhibit 5, Map 2)

The Meadow Brook Tributary 100 year floodplain occupies both shores of the watercourse. There is currently one 345kV transmission line (Section 388) that spans the brook and no existing poles are located in the floodplain. When the MPRP project is completed, there will be three transmission lines spanning the tributary and two poles located in the floodplain.

As part of the MPRP, CMP proposes to remove a portion of the existing Section 388 line and rebuild the line near the center of an expanded corridor. (The corridor will be widened by 100' on the south side to accommodate new transmission lines.) As part of the rebuild of Section 388, one H-Frame (#388-354) will be located in the floodplain.

CMP proposes two additional transmission lines in the expanded corridor: Section 3023 on the south side, which will operate at 345kV; and Section 254 on the north side, which will operate at 115kV. One new Section 254 H-Frame (#254-360) will be located in the floodplain.

Table III-2. MPRP Poles in Meadow Brook Tributary A Zone		
Pole	#254-360 (new)	#388-354 (rebuilt)
Type/Description	H-Frame	H-Frame
Material	Wood	Wood
Foundation	No	No
Height	98	108
Embedded Length (Ft)	12	12
Pole Diameter (Ft)* (2 poles per H-Frame)	4	4
Pole Area (Sq. Ft) * (2 poles per H-Frame)	25	25

*Includes 2 foot buffer.

Clearing of vegetation in the floodplain will be required on the north side of the corridor between the existing transmission line and the gas pipeline (0.2 acres); and over the new 100' strip on the south side of the expanded corridor (1.3 acres). A temporary equipment access way will also cross the floodplain for a distance of 245', but will not cross the floodway or the brook.

3. Meadow Brook A Zone (Exhibit 5, Map 3)

The Meadow Brook 100 year floodplain occupies both shores of the brook. There is currently one 345kV transmission line (Section 388) that spans the brook, and no existing poles are located in the floodplain. As presently designed, when the MPRP project is completed, there will be three transmission lines spanning the brook and one H-Frame and two single poles located in the floodplain.

CMP proposes to remove a portion of the existing Section 388 line and rebuild the line near the center of the existing corridor. One rebuilt single pole (#388-365) will be located in the floodplain.

The MPRP proposes two additional transmission lines in the existing corridor: Section 3023 on the south side, which will operate at 345kV, and Section 254 on the north side, which will operate at 115kV. One new Section 3023 H-Frame (#3023-418) and one new Section 254 single pole (#254-370) will be located in the floodplain.²

Table III-3. MPRP Pole Structures in Meadow Brook A Zone			
Pole Structure	#254-370 (new)	#388-365 (rebuild)	#3023-418 (new)
Type/Description	Single Pole	Single Pole	H-Frame
Material	Steel	Steel	Wood
Foundation	Yes	Yes	No
Height	140	140	79
Embedded Length (Ft)	n/a	n/a	11
Pole/Foundation Diameter (Ft)*	5	5	4
Pole Area (Sq. Ft) * (2 poles per H-Frame)	20	20	25

*Includes 2 foot buffer.

² If CMP is able to acquire additional property and widen the corridor in the area crossing Meadow Brook, CMP will use two-pole H-Frames to carry Section 254 and Section 388 instead of single poles. (See footnote 1 on page I-3.) If H-Frames are used, a total of three H-Frames will be located within the Meadow Brook A Zone as opposed to the one H-Frame and two single poles discussed above and noted in Table III-3.

Clearing of trees in the floodplain will be required over an area of 0.1 acre south of Meadow Brook. A temporary equipment access way will cross the floodplain for a distance of 60' between Loggin Road and Meadow Brook.

4. Marsh Stream AE Zone at Frankfort/Winterport Town Line (Exhibit 5, Map 4)

The 100 year floodplain is located south of Marsh Stream. There is currently one 345kV transmission line (Section 388) that spans the stream, and no existing poles are located in the floodplain. When the MPRP project is completed, there will be three transmission lines spanning the stream and one new H-Frame located at the edge of the floodplain.

Existing transmission line Section 388 will continue to operate in its present location.

The MPRP proposes two additional transmission lines in an expanded corridor: Section 3023 on the south side, which will operate at 345kV and Section 254 on the north side, which will operate at 115kV. (The corridor will be widened by 245' on the south side to accommodate Section 3023 in the desired location.) One new Section 254 H-Frame (#254-400) will be located on the edge of the floodplain.

Table III-4. MPRP Pole Structures in Marsh Stream AE Zone at Frankfort/Winterport Town Line	
Pole Structure	#254-400 (new)
Type/Description	H-Frame
Material	Wood
Foundation	No
Height	103
Embedded Length (Ft)	12
Pole Diameter (Ft)* (2 poles per H-Frame)	4
Pole Area (Sq. Ft)* (2 poles per H-Frame)	25

*Includes 2 foot buffer.

Clearing of trees in the floodplain will be required over an area of 0.9 acres, including a strip 85' wide on the north side of the corridor and a strip from 85' to 135' wide on the expanded south side of the corridor. The temporary equipment access way extends about 5' into the floodplain to H-Frame # 254-400.

Clearing of Trees

Removal of woody plant species that are capable of growing tall enough to reach within the required clearance distance between the conductors and vegetation is essential to ensure the reliability and safe operation of the transmission line. Due to the sag in the height above ground of electric transmission lines between poles, which varies with the distance between poles, tension on the wire, electrical load, air temperature and other changing conditions, the required reliability clearances are typically achieved by removing all capable species.

Generally, all trees and saplings of capable species and some tall shrubs are cut to ground level. Root systems are left in place. All slash from the cutting operation is disposed of in accordance

with the Maine Slash Law (12 M.R.S.A. § 9333). The remaining vegetation is typically scattered growth of small shrubs of non-capable species and herbaceous plants.

The temporary removal of other understory vegetation and ground cover will occur only as needed to install a pole, to create access to the corridor, and for puller/tensioner sites. (Infrequently, it may also be necessary to remove mature “danger trees” that are large enough and positioned so that they could fall into the conductors.)

After construction is completed, non-capable species will be allowed to grow back in to ensure that the corridor is vegetated, which prevents erosion and provides wildlife habitat. Over a relatively short period of time (generally within one calendar year), the newly cleared portions of the corridors will exhibit the early-successional habitat type that is typical of existing transmission line corridors in Maine. Future tree removal within the 25 foot stream shores will be limited to species that are capable of growing into the conductor safety zone during the next maintenance cycle (typically 4 to 5 years) and that are greater than 8 to 10 feet tall (capable species). Thus, a similar degree of shore cover to that which currently exists will be maintained.

Temporary Access Ways

There will be no new permanent roads associated with the project. CMP has historically maintained points of access to and access ways within the corridor for use by its own vehicles for periodic routine and emergency maintenance of the corridor and transmission facilities. This practice will continue.

Temporary access ways will be established for general access to the corridor for construction purposes. These temporary access ways will be in place for more than one growing season but will be removed once all aspects of construction in that area are complete. Temporary access ways to individual pole sites will be in place for no more than one growing season. Areas where soils have been disturbed will then be mulched with hay. Vegetation will be allowed to reestablish itself once the temporary access ways have been removed.

Measures will be taken to avoid and minimize the impact of access ways on streams and wetlands through the use of crane mats, temporary bridges, geo-textile fabrics, and culverts, when necessary. Appropriate erosion controls will be installed. There will be no routine grubbing (removal of root systems); however, occasional root removal and minor grading may be required to ensure mat stability and construction access safety. Such grading will be performed on a limited basis and only with prior approval by CMP’s environmental representatives.

Pole Removal and Installation

Poles to be Removed: Poles to be removed in Frankfort are the embedded wooden poles. Wooden poles will be cut below ground level and the embedded portions left in place. Above-ground pole segments are salvaged or disposed of off site in accordance with state and local solid waste laws.

New Wooden Poles (H-Frames): Excavation is limited to that which is necessary to embed wood poles to predetermined lengths. Once plumbed, poles are backfilled with soil excavated on site, except in wet areas, where crushed rock is used to replace some of the soil. Any excess soil is removed and disposed of in an upland location, spread out, and mulched.

New Steel Single-poles with Foundations: Typically, foundations for steel single-poles are round and project 12-24 inches above ground. Anchor rods embedded within the reinforced concrete foundation bolt directly to the base plate of each steel pole, securing the pole to the foundation. Once the concrete foundation is installed, a crane device is used to position the pole on the foundation. Temporary access ways for installation of these poles are often improved to support the heavier equipment needed to construct the foundations and install the steel poles.

Erosion and Sedimentation Control Plan

CMP's *Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects* (Standard Exhibit H) are used on all transmission line projects. The Guidelines address road construction, stream and wetland crossings, and construction in wetlands; installation of bridges, culverts, crane mats and corduroy; the use of surface water diversion structures and structural and nonstructural sediment barriers; winter construction considerations; and site restoration.

The Guidelines include specifications for the implementation of soil erosion and sedimentation control measures for CMP personnel, their representatives and contractors. The Guidelines provide a single set of erosion control specifications for the MPRP. The goals of these measures are to minimize soil movement and loss, preserve the integrity of environmentally sensitive areas, and maintain existing water quality. The Guidelines were developed in consultation with the Maine Department of Environmental Protection and are largely based on DEP's Maine Erosion and Sediment Control BMPs, dated March 2003, and DEP's Chapter 500. All bid packages and contracts for work performed on the MPRP will include these guidelines. CMP representatives will ensure that the procedures contained in the Guidelines are followed by regularly inspecting all work and requiring corrective action when necessary.

Flood Hazard Area Development Standards

Article VI of the Frankfort Floodplain Management Ordinance includes the Development Standards discussed in this part of the application. As described below, the project proposed by CMP satisfies each of these standards.

A. All Development - All development shall:

1. be designed or modified and adequately anchored to prevent flotation (excluding piers and docks), collapse or lateral movement of the development resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
2. use construction materials that are resistant to flood damage;
3. use construction methods and practices that will minimize flood damage; and
4. use electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during flooding conditions.

Exhibit 3 includes an engineer's statement describing how standards A-1 through A-3 will be met. A-4 does not apply to the project.³

³ If CMP is able to use the design alternative described in footnote 2 (page III-7) and footnote 1 (page I-3), the engineer's statement in Exhibit 3 still applies. If CMP is able to use the H-Frames in the Meadow Brook A zone, as opposed to the single poles, the project still fully complies with Frankfort's Floodplain Management Ordinance. CMP seeks approval of both alternative designs.

B. Water Supply

Not applicable.

C. Sanitary Sewage Systems

Not applicable.

D. On Site Waste Disposal Systems

Not applicable.

E. Watercourse Carrying Capacity

Not applicable.

F. Residential

Not applicable.

G. Non Residential

Not applicable.

H. Manufactured Homes

Not applicable.

I. Recreational Vehicles

Not applicable.

J. Accessory Structures

Not applicable.

K. Floodways

Not applicable. No transmission line poles and no permanent access ways will be located in floodways.

L. Enclosed Areas Below the Lowest Floor

Not applicable.

M. Bridges

Not applicable.

N. Containment Walls

Not applicable.

O. Wharves, Piers and Docks

Not applicable.

**Flood Hazard Development
Application Exhibits**

APPENDIX A
DEFINITION OF TERMS

APPENDIX B
CONSTRUCTION MATERIALS SOURCE LIST

APPENDIX C
OTHER RECOMMENDED REFERENCE
MANUALS

APPENDIX D
CONSTRUCTION TECHNIQUE ILLUSTRATIONS

APPENDIX E
EROSION AND SEDIMENTATION CONTROL LAW* 38
M.R.S.A. § 420-C

APPENDIX F
MAINE SLASH LAW* 12 M.R.S.A. § 9333

APPENDIX G
CULVERT SIZES FOR STREAM CROSSINGS
(3X RULE)