



**MAINE POWER
RELIABILITY PROGRAM**
A CENTRAL MAINE POWER COMPANY PROGRAM

**MORRILL, MAINE
SHORELAND ZONING PERMIT**

Section 254 Transmission Line Construction

Application Amendments

Prepared for:

Central Maine Power Company
83 Edison Drive
Augusta, Maine 04336

Prepared by:



TRC Engineers, LLC
14 Gabriel Drive
Augusta, Maine 04330

June 2010

Introduction to Application Amendments

This amended application for a shoreland zoning permit updates information about CMP's proposed transmission line to reflect a redesign of the project since the original permit was issued in August 2009. It also updates ordinance references and terms to reflect the new shoreland zoning ordinance adopted by the Town in March 2010. Additionally, CMP has included updated or new exhibits that reflect recent project requirements of the Department of Environmental Protection.

Changes to CMP's original May 2009 application are indicated in **red**. An index of changes to the original application, which allows comparisons between original and amended applications, follows this introduction.

Procedural Background

On May 22, 2009, Central Maine Power Company submitted an application to the Morrill Planning Board for approval of a new transmission line in areas governed by the Town's shoreland Zoning Ordinance. The Board considered the application at two meetings: on June 24, 2009, which included a public hearing, and on July 7, 2009. Notice of the public hearing was mailed to abutters and published in the Bangor Daily News. On August 7, 2009, the Planning Board approved CMP's application.

In October 19, 2009, CMP notified the Planning Board Chair that ISO-New England had directed CMP to redesign the proposed transmission line and that new information would be provided to the Board as soon as possible.

On March 10, 2010, CMP submitted to the Planning Board Chair a request for a permit amendment to reflect the design changes in the project. With the request CMP submitted a document describing these changes and their significance in relation to the terms of the shoreland zoning ordinance then in effect. (See "Changes to the Proposed Maine Power Reliability Program in Morrill Resulting from the Redesign of Transmission Line Section 254," March 2010.)

On June 2, 2010 a CMP representative met with the Planning Board to discuss the project design changes and the request for a permit amendment. At that meeting, the Board indicated that the Town had adopted a new shoreland zoning ordinance at its annual Town Meeting to bring the local ordinance into compliance with the latest state guidelines. CMP and the Board agreed to postpone the permit amendment to determine whether CMP should seek approval for the project under the new ordinance.

New Shoreland Zoning Ordinance

The Town Clerk verified that a new shoreland Zoning Ordinance – the most recent State of Maine Guidelines for Municipal Shoreland Zoning Ordinances - was adopted at the annual Town Meeting on March 20, 2010. The Town Clerk verified that notice of adoption of the new

ordinance was sent to DEP near the time of adoption, and followed later by submittal the new ordinance to DEP.

A map entitled “Town of Morrill Moderate & High Value Freshwater Wetlands-Revised” was adopted with the new ordinance text. The purpose of this map is to indicate, based on habitat value, what wetlands should be included in a Resource Protection District on the Town’s Shoreland Zoning Map. A revised shoreland zoning map was not submitted for adoption at the March 20th Town Meeting. According to DEP shoreland zoning staff, the current shoreland zoning map remains in effect until a revised map is adopted by the Town. The newly adopted ordinance text became effective upon adoption. The Town Clerk anticipates that a revised shoreland zoning map will presented for adoption at a special town meeting in July 2010.

Amended Application

CMP believes its request to amend a permit issued under the prior ordinance was submitted while that ordinance was still in effect and may be legitimately be considered by the Planning Board under the terms of that ordinance.

CMP also believes that the redesigned project meets the terms of the newly adopted ordinance text and existing map which are now in effect. CMP now submits an amended shoreland zoning permit application, which demonstrates compliance with the Town’s current ordinance and map.

Anticipated Changes to the Zoning Map

As CMP understands it, the required change to the shoreland zoning map that would affect CMP’s project is the rezoning of land along the northwest shore of Smiths Millpond from a Limited Residential District to a Resource Protection District. (Two transmission line structures are proposed in this area.)

CMP believes that the amended application demonstrates compliance with the Town’s shoreland zoning ordinance, whether its corridor on Smith’s Millpond is in a Limited Residential District or a Resource Protection District.

As an “essential service,” electrical transmission lines are allowable in both districts and require approval by the Planning Board (Ordinance Section 14). When proposed in a Resource Protection District or a [Wetland/]Stream Protection District, the applicant must show that no reasonable alternative exists and that structures and facilities are located so as to minimize any adverse impacts. As described in the amended application under Land Use Standard L., Essential Services (Ordinance Section 15), CMP believes that the proposed project meets this test.

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Application Form

Town of Morrill
Shoreland Zoning Permit Application

FOR OFFICIAL USE ONLY:	
PERMIT NO.	
ISSUE DATE:	
FEE AMOUNT:	

General Information

1. Applicant <u>Central Maine Power Co.</u> <u>c/o Mary Smith</u>	2. Applicant's Address <u>83 Edison Drive</u> <u>Augusta, ME 04336</u>	Applicant's Tel. # <u>207-626-4006</u>
4. Property Owner <u>Same as Applicant</u>	5. Owner's Address <u>Same as Applicant</u>	6. Owner's Tel. # <u>Same as Applicant</u>
7. Contractor <u>To be announced</u>	8. Contractor's Address <u>To be announced</u>	9. Contractor's Tel. # <u>To be announced</u>
10. Location/Address of Property <u>Property is the existing CMP transmission line corridor that extends through Morrill from the Waldo/Morrill town line in the north to the Morrill/Searsmont town line in the south.</u>	11. Tax Map/Page & Lot # <u>Tax Maps 1, 4, 7 and 8: no lot numbers assigned. Tax Map 11, Lots 18 and 19.</u>	12. Zoning District <ul style="list-style-type: none"> • <u>Limited Residential</u> • <u>Wetland/Stream Protection</u>
<p>13. Description of the property including a description of all proposed construction, E.G. Land Clearing, Road Building, Septic Systems, and wells (Please Note That a Site Plan Sketch is required on page 3.)</p> <p><u>The Maine Power Reliability Program (MPRP) is a project of Central Maine Power Company (CMP) to upgrade the bulk electrical power system throughout much of its service area. In Morrill, the project involves construction of a new 115 kV electrical transmission line located parallel to and northwest of the existing 345 kV transmission line and entirely within the existing CMP corridor. The proposed transmission line crosses five areas identified on Morrill's Shoreland Zoning Map as subject to Morrill's Shoreland Zoning Ordinance. This application addresses project development in those five areas: Smiths Millpond Limited Residential District; and Wetland/Stream Protection Districts on Simmons Brook, Poland Stream, Unnamed Stream and Unnamed Wetland.</u></p> <p><u>The proposed construction is more fully described in the attached application narrative and illustrated in a number of exhibits.</u></p>		

Shoreland and Property Information

<p>16. Lot Area <u>Not applicable. Nevertheless, the CMP corridor areas in the Shoreland Zoning Districts are: Limited Residential = 5.2 acres; Simmons Brook Wetland/Stream Protection = 0.25 acres; Poland Stream Wetland/Stream Protection = 1.05 acres; Unnamed Stream Wetland/Stream Protection = 0.98 acres; Unnamed Wetland Wetland/Stream Protection = 4.98 acres. (Note: These are not lot sizes, but rather the area of the corridor within the various shoreland districts.)</u></p>	<p>17. Frontage on road (ft) <u>Not applicable. There is no known CMP corridor frontage on a public road within the shoreland zone. Nevertheless, public road frontage elsewhere within the corridor includes: Weymouth Rd North side: 289'; Weymouth Rd South side: 284'; North Main St East side: 335'; North Main St West side: 335'.</u></p>
<p>18. Sq. ft of lot covered by non-vegetated surfaces <u>Seven pole structures @ 25 sq. ft. per structure = 175 square feet (total across all shoreland districts).</u></p>	<p>19. Elevation above 100 year flood <u>Project crosses no designated federal flood hazard areas.</u></p>
<p>20. Frontage on Waterbody (ft): Not applicable. <u>Nevertheless, great pond and stream frontage within the CMP corridor includes: Smiths Millpond: 892'; Simmons Brook: 732' (both shores); Poland Stream: 618' (both shores); Unnamed Brook south of Poland Stream: 570' (both shores).</u></p>	<p>21. Height of proposed structure <u>Five pole structures in shoreland zoning districts are approximately 65.5' in height above ground; two are approximately 61' in height above ground.</u></p>
<p>22. Existing use of property <u>345 kV electrical power transmission line & corridor with 7 pole structures in or adjacent to the shoreland zone; Maritimes & NE natural gas pipeline; AT&T cable.</u></p>	<p>23. Proposed use of structure <u>New 115 kV electrical transmission line with 7 new pole structures in the shoreland zone.</u></p>

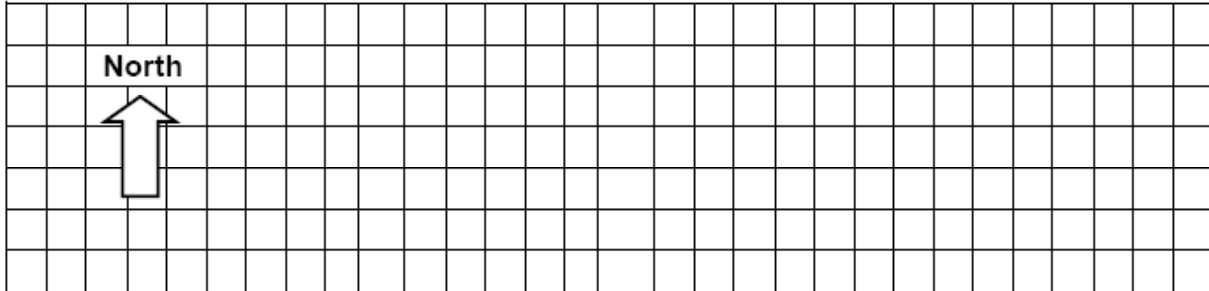
Note: Questions 24 & 25 apply only to expansions of portions of existing structures which are less than the required setback.

<p>24. A) Sq. ft. of the portion of the structure which is less than the requires setback as of 1/1/89 <u>There will be no expansion of existing structures.</u></p>	<p>25. A) Cu. Ft. portion of structure which is less than the required setback as of 1/1/89 <u>There will be no expansion of existing structures.</u></p>
<p>B) Sq. ft. of the expansion of the portion of the structure which is less than the required setback from 1/1/89 to</p>	<p>B) Cu. ft. of the expansion of the portion of the structure which is less than the required setback from 1/1/89 to</p>
<p>C) Sq. ft. of proposed expansion of portion of the structure which is less than required setback</p>	<p>C) Cu. ft. of proposed expansion of portion of the structure which is less than required setback</p>
<p>D) % increase of sq. ft. of actual and proposed expansions of portion of structure which is less than the required setback since 1/1/89 $\left[\% \text{ increase} = \frac{B + C \times 100}{A} \right]$</p>	<p>D) % increase of cu. ft. of actual and proposed expansions of portion of structure which is less than the required setback since 1/1/89 $\left[\% \text{ increase} = \frac{B + C \times 100}{A} \right]$</p>

Note: It is imperative that each Municipality define what constitutes a structure, floor area and volume and apply those definitions uniformly when calculating existing and proposed sq. ft. and cu. ft.

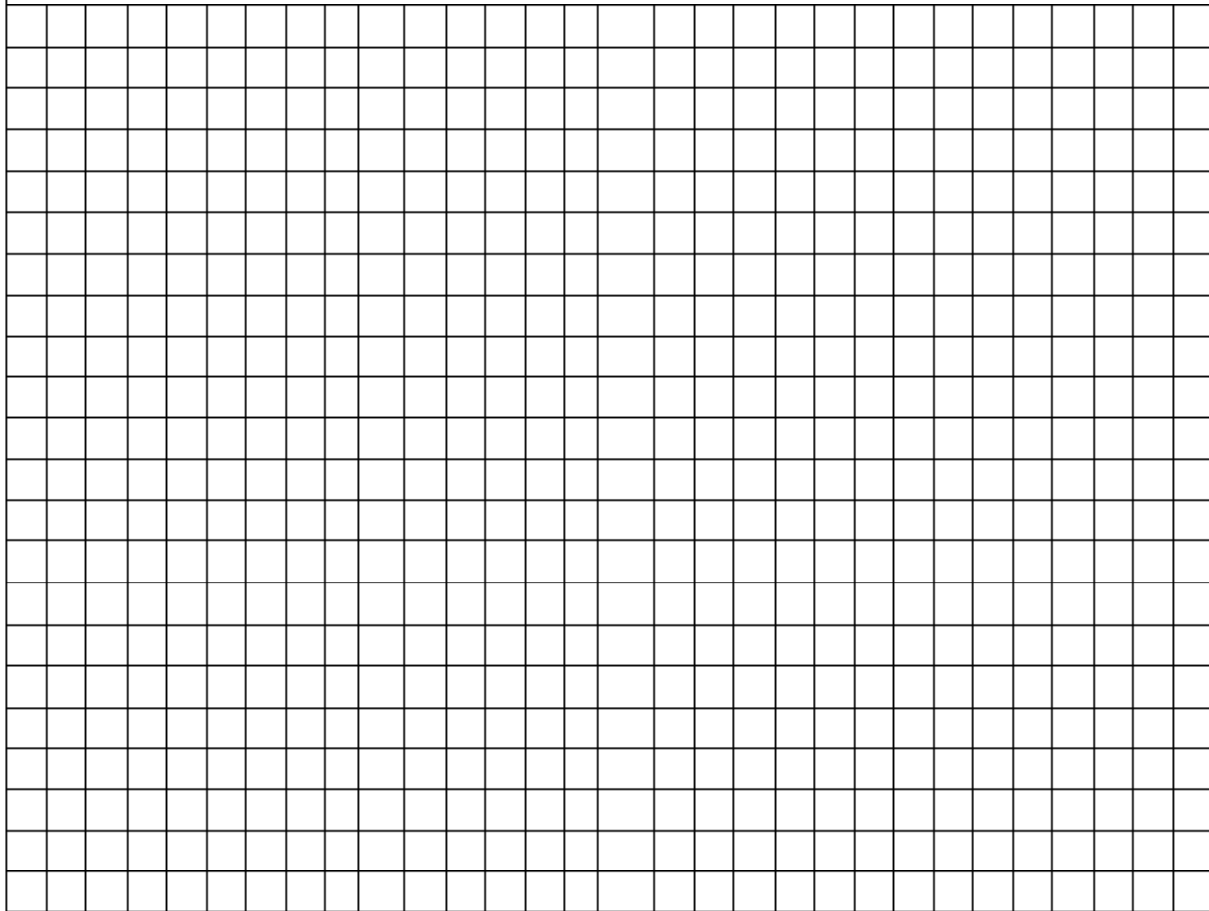
Site Plan

Please include: Lot lines; Area to be cleared of trees and other vegetation; The exact position of proposed structures, including decks, porches, and other out buildings with accurate setback distances from the shoreline, side and rear property lines; The location of proposed wells, septic systems, and driveways; and areas and amounts to be filled or graded. If the proposal is for the expansion of an existing structure, please distinguish between the existing structure and the proposed expansion.



See Attached Text and Exhibits. in particular:

- Revised Exhibit 2, Transmission Line Configuration Cross Sections
- Revised Exhibit 3, Transmission Line Pole Structure Information
- Revised Exhibit 5, Project Scope and Shoreland Zoning Maps
- Revised Exhibit 6, Project Scope and Natural Resources Maps
- Revised Exhibit 7. Shoreland Detail Maps



Front or Rear Elevation

Side Elevation

Revised Exhibit 2, Transmission Line Configuration Cross Section

Draw a simple sketch showing both the existing and proposed structures.

Additional Permits, Approvals, and/or Reviews Required

Check if required

- Planning Board Review/approval**
(e.g., Subdivision, Site Plan Review) Shoreland Zoning

- Board of Appeals Review/approval**

- Flood Hazard Development Permit** Project crosses no designated federal flood hazard areas.

- Exterior Plumbing Permit**
(Approved HHE 200 Application Form)

- Interior Plumbing Permit**

- DEP Permit**
(Site Location, Natural Resources Protection Act) **Both approved April 5, 2010.**

- Army Corps of Engineers Permit**
(e.g., Sec.404 of Clean Water Act) **Approval anticipated by July 1, 2010.**

- Others**

- Maine Public Utilities Commission**
(Certificate of Need & Public Convenience, 35-A MRSA Sec 3132) **Approved June 10, 2010.**

- _____

- _____

- _____

- _____

Note: Applicant is advised to consult with the Code Enforcement Officer and appropriate State and Federal Agencies to determine whether additional permits, approvals and reviews are required.

I certify that all information given in this application is accurate. All proposed uses shall be in conformance with this application and the Town of Morrill Shoreland Zoning Ordinance. I agree to future inspections by the Code Enforcement Officer at reasonable Hours.

Applicant's Signature

Date

Cynthia A. Bastey

Agent's Signature (if Applicable)

6/25/10

Date

Approval or Denial of Application
(For Office use Only)

Map _____

Lot _____

This Application is: _____ Approved _____ Denied

If Denied, Reason for Denial:

If Approved, the following conditions are prescribed:

Note: In approving a Shoreland Zoning Permit, The proposed use shall comply with the purposes and requirements of the Shoreland Zoning Ordinance for the Town of Morrill.

Code Enforcement Officer

Date

Inspection Check List

- Prior to Clearing and excavation
- Prior to Foundation Pour
- Prior to Final Landscaping
- Prior to Occupancy

Permit #	_____
Fee Amount	_____

Agent Authorization Letter



Central Maine Power

August 15, 2008

Bureau of Land & Water Quality
Division of Land Resource Regulation
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

Municipalities (various)

Federal Agencies (various)

RE: Central Maine Power Company - Maine Power Reliability Program (MPRP)
Agent Authorization

To Whom It May Concern:

Central Maine Power Company hereby authorizes TRC Engineers, Inc. and TRC staff to act as its agent for all activities associated with the acquisition of Federal, state and local permits related to the above referenced project.

Please call me at 626-9557 or email me at gerry.mirabile@comco.com with any questions. Thank you.

Sincerely,

Gerry J. Mirabile
Lead Analyst - Compliance

An equal opportunity employer

83 Edison Drive | Augusta, ME 04336

tel (207) 623-3521

www.comco.com

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An Energy East Company

SHORELAND ZONING PERMIT APPLICATION

Introduction

The project described in these application materials is located, in part, within Morrill's shoreland zone. Those portions of the project within the shoreland zone require approval under Morrill's Shoreland Zoning Ordinance. These application materials describe the proposed project, focusing on those portions within the shoreland zone, and the applicable shoreland zoning provisions. The application materials are divided into the following parts:

- Part A: Project Overview and Description – beginning on page 1
- Part B: Land Use Standards (from Section 15 of the Shoreland Zoning Ordinance) – beginning on page 7
- Part C: Approval Criteria (from Section 16(D) of the Shoreland Zoning Ordinance) – beginning on page 13
- Exhibits: Following page 16

PART A: PROJECT OVERVIEW AND DESCRIPTION

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 assessed and addressed.

In January of 2007, the MPRP began a comprehensive needs assessment of CMP's 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 known 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 to the north. In all, MPRP will encompass nearly 80 Maine towns, and will require approvals from the Maine Public Utilities Commission, the Maine Department of Environmental Protection (MDEP), and numerous municipalities.

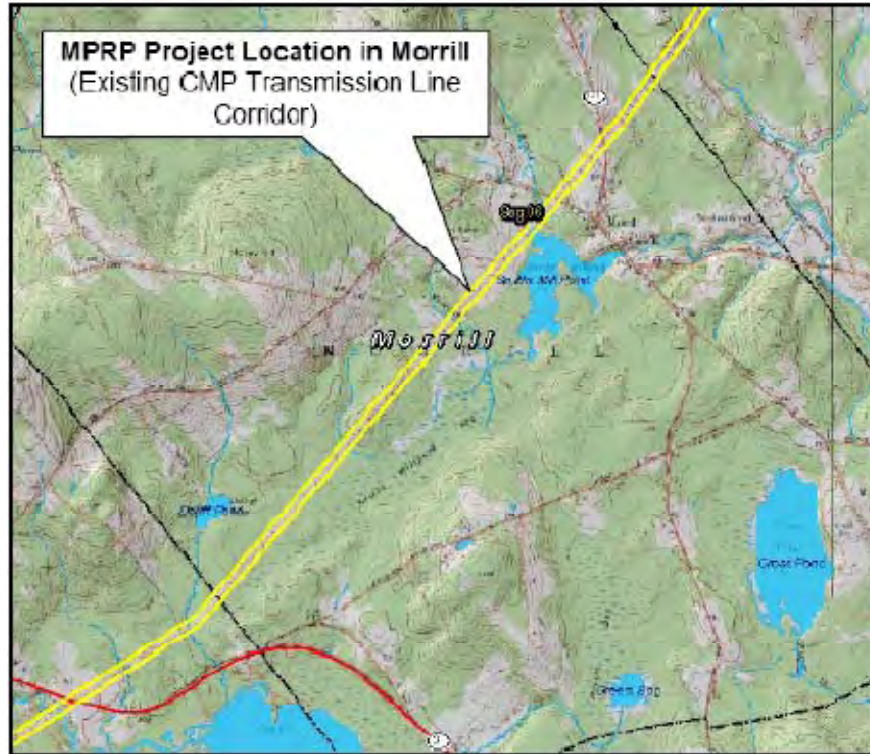
See Exhibit 1, Maine Power Reliability Program (MPRP) Project Scope Map.

The proposed upgrades in Morrill, 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.

Project Description in Morrill

The proposed new transmission line will be located parallel to and northwest of the existing 345 kV line, and will include 34 new H-Frame wooden pole structures built to **115 kV standards that are generally shorter than** those already in the corridor. New pole heights will range from approximately **52 feet to 70 feet**, with an average height of **62 feet** in Morrill. Only seven of the 34 new H-frame pole structures will be located in the shoreland zone. The height of those seven structures will range from approximately **61 feet to 65.5 feet** in height.

*See **Revised** Exhibit 2, Transmission Line Configuration Cross Sections, and **Revised** Exhibit 3, MPRP Transmission Line Shoreland Pole Structure Information.*



Morrill's Shoreland Zoning Ordinance and Map

The Morrill Shoreland Zoning Ordinance is the [State of Maine Guidelines for Municipal Shoreland Zoning Ordinances...as amended through May 1, 2006](#), adopted at Town Meeting on [May 20, 2010](#). The Town of Morrill Shoreland Zoning Map cites an effective date of September 21, 1995 and bears the signature of the Town Clerk.

To show the proximity of CMP's transmission corridor and the proposed 115 kV transmission line to the shoreland zoning districts in Morrill, the corridor location and proposed pole locations have been superimposed on the Town's Shoreland Zoning Map using a digital Geographic Information System (GIS). This representation is as accurate as possible given the different map sources.

See [Revised Exhibit 4, Morrill Shoreland Zoning Map with CMP Corridor and MPRP Pole Locations](#).

Permitted Land Uses

Under Morrill's Shoreland Zoning Ordinance, electrical transmission lines are included in the definition of "essential services" (Ordinance Section 1, [Definitions](#)) which, according to the Table of Land Uses (Ordinance Section 14, [Table of Land Uses](#)) are a permitted use in all districts with the approval of the Planning Board, subject to specific standards in Ordinance Section 15-L, discussed below.

Shoreland Zoning Districts through Which the MPRP Will Run

The new transmission line will cross two shoreland zoning districts in five locations in Morrill:

- the 250 foot Limited Residential District on the northwest shore of Smiths Millpond; and
- the 75 foot Wetland/Stream Protection District on three streams and one wetland south of Smith’s Millpond.

As the following table shows, only seven H-Frame utility pole structures proposed in Morrill will be located in a shoreland zoning district. **Some** clearing of vegetation will be required in **each** of the shoreland zoning areas along the corridor and temporary access ways will run along the corridor, allowing the movement of construction equipment from one utility pole location to another.

Shoreland Zoning District	Location	Proposed Transmission Line Development		
		New Pole Structures	Clearing of Vegetation	Temporary Access Ways
Limited Residential (250 feet)	Northwest shore of Smiths Millpond	2	yes	yes
Wetland/Stream Protection (75 feet)	Simmons Brook	0	yes	no
Wetland/Stream Protection (75 feet)	Poland Stream	0	yes	yes
Wetland/Stream Protection (75 feet)	Unnamed stream south of Poland Stream	0	yes	yes
Wetland/Stream Protection (75 feet)	Unnamed wetland east of Doliff Pond	5	yes	yes

To locate the shoreland zoning districts and MPRP development features on maps at a larger scale than the Town’s zoning map, CMP transposed the shoreland zones onto an enlarged version of a USGS map like that on which zoning appears.¹ See *Revised Exhibit 5, Project Scope and Shoreland Zoning Maps, Maps 2 through 5.*

Revised Exhibit 6, Project Scope and Natural Resource Maps, and Revised Exhibit 7, Shoreland Detail Maps, show the proposed development on aerial photographs with natural resource information gathered during project planning.

¹ The Morrill Shoreland Zoning map was created on a USGS topographic map at a scale of 1 inch = 2000 feet. At this scale, the map lines denoting the shoreland boundaries can represent as much as fifty feet on the ground. Therefore, the process of moving from one map scale to another includes a margin for error.

Proposed MPRP Development by Shoreland Zoning District

1. Limited Residential (LR) District on Smiths Millpond (250') Revised Exhibit 5, Map 2.

The LR District includes approximately 5.2 acres of CMP corridor lands within 250' of the Smiths Millpond shoreline shown on the USGS map. (Consistent with Zoning Map Note 2, this shoreline includes contiguous wetlands at the same elevation as the normal high water mark of the pond.)

The new transmission line will include two new H-Frame wooden pole structures in the Limited Residential District: #254-249 and #254-248, shown on Revised Exhibit 5, Map 2.

Clearing of trees in the LR District will remove a strip of trees remaining between the existing transmission line and natural gas pipeline, an area of about 0.37 acres along the route of the new transmission line. Temporary equipment access ways located west of the proposed transmission line will serve structure #254-248 from the south and structure #254-249 from the north and avoid crossing much of the district. The access way will require a temporary crossing over Simmons Brook. Clearing and construction of the access way and stream crossing will be done in accordance with Revised Exhibit 10, Environmental Guidelines, and New Exhibit 11, Vegetation Management Practices, which are discussed under Part B, Land Use Standards.

[Note: It is anticipated that the LR District on Smiths Millpond will become Resource Protection District upon adoption of a revised shoreland zoning map in July 2010.]

2. Wetland/Stream Protection District (WSP) on Simmons Brook (75') Revised Exhibit 5, Map 2.

This district includes about 0.3 acres of CMP corridor lands within 75' of the brook line shown on the USGS map, where the brook is not otherwise included within the LR District on Smiths Millpond. There will be no new pole structures and no access ways within in the district. Clearing will affect a small area of about 206 sq. ft. and will be done in accordance with Revised Exhibit 10, Environmental Guidelines, and New Exhibit 11, Vegetation Management Practices.

3. Wetland/Stream Protection District (WSP) on Poland Stream (75') Revised Exhibit 5, Map 3.

This district includes approximately one acre of CMP corridor lands within 75' of the stream line shown on the USGS map. (Aerial photos and field surveys indicate the stream location has changed somewhat since the time of the USGS map.)

There will be no new pole structures within in this WSP District. Clearing of trees will affect a small area of about 415 sq. ft. A temporary equipment access way will be located near the route of the proposed transmission line. The access way will require a temporary crossing over Poland Stream for which an existing crossing will be used. Clearing and construction of the access way and stream crossing will be done in accordance with Revised Exhibit 10, Environmental Guidelines, and New Exhibit 11, Vegetation Management Practices.

4. Wetland/Stream Protection District (WSP) on Unnamed Stream (75') Revised Exhibit 5, Map 4.

This district includes about one acre of CMP corridor lands within 75' of the stream line shown on the USGS map. (Aerial photos and field surveys indicate the stream location has changed somewhat since the time of the USGS map.)

There will be no new pole structures located in this district.

Clearing of trees in this WSP District will remove the strip of trees remaining between the existing transmission line and natural gas pipeline, an area of about 0.07 acres along the route of the new transmission line. A temporary equipment access way will be located **along the route of the proposed transmission line**. The access way will require a temporary crossing over the Unnamed Stream. Clearing and construction of the access way and stream crossing will be done in accordance with **Revised Exhibit 10, Environmental Guidelines, and New Exhibit 11, Vegetation Management Practices**.

5. Wetland/Stream Protection District (WSP) on Unnamed Wetland (75') Revised Exhibit 5, Map 5.

This district includes approximately 5 acres of CMP corridor lands within 75' of the upland edge of the wetland. (Freshwater wetlands governed by the Town's shoreland zoning ordinance include non-forested areas of 10 or more acres that support wetland vegetation. **See previous Shoreland Zoning Ordinance Section 17, p. 33**).

The new 115kV transmission line in this WSP District will include five (5) new H-Frame wooden pole structures in this WSP District adjacent to the freshwater wetland: **#254-226, #254-227, #254-228, #254-229 and #254-230**, shown on **Revised Exhibit 5, Map 5**.

When superimposed on the Shoreland Zoning Map, MPRP Poles **#254-226 and #254-230** are located on or just **inside** the WSP District boundary. For purposes of this shoreland zoning application, CMP assumes these poles to be within the WSP District.

Within this district 0.87 acres of trees between the existing transmission line and natural gas pipeline will be cleared. A temporary equipment access way will be located between the existing and proposed transmission lines. Clearing and construction of the access way and stream crossing will be done in accordance with **Revised Exhibit 10, Environmental Guidelines, and New Exhibit 11, Vegetation Management Practices**.

**PART B:
LAND USE STANDARDS**

Section 15 of the Morrill 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. (See Ordinance Section 17.) 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 (up to 18 feet in width), which are not considered roads or driveways and which do not add impervious surface area, will be established for use during the construction period. This will be a progressive activity in which access is established to areas of pending construction, while access ways to areas of completed construction are closed out.

The nature of these temporary access routes will be determined by CMP's environmental representative and the contractor based on conditions at the site.

Revised Exhibit 5, Maps 2-5 illustrate the temporary access ways proposed for this project.

Temporary access way 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. Access to pole sites, either for removal or construction, will be achieved by temporary access ways which 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) 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 **Revised Exhibit 10, Environmental Guidelines.**

CMP's "Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects, **Revised for MPRP January 2010**" provides greater detail about the construction practices used to meet Land Use Standards for Roads and Driveways, Essential Services, Clearing of Vegetation for Development, Erosion and Sedimentation Control and Water Quality.

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. (The wooden H-Frame pole structures have a **ground area of approximately 25 sq ft per structure.**) 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 predevelopment 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, **Revised Exhibit 10 and Vegetation Management Practices, New Exhibit 11.**

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 4-5 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 possible. The location of new transmission lines within 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 115 kV transmission line in Morrill will occur entirely within the existing CMP corridor. There will be no widening of the corridor by acquisition of additional land or by clearing of trees. Rather, the residual strip of capable species that lies along the route of the new transmission line and between areas already cleared for the existing transmission line and natural gas pipeline will be removed and replaced with shrub and herbaceous vegetation.

(2) The installation of essential services, **other than road-side distribution lines**, is not allowed in a Resource Protection or **[Wetland]/Stream Protection District**, except to provide services to a permitted use within said district, or except where the applicant demonstrates that no reasonable alternative exists. Where allowed, such structures and facilities shall be located so as to minimize any adverse impacts on surrounding uses and resources, including visual impacts. (**Ordinance Section 15(L)(2)**)

(3) Damaged or destroyed public utility transmission and distribution lines, towers and related equipment may be replaced or reconstructed without a permit (Ordinance Section 15(L)(3)).

The new transmission line will cross four Wetland/Stream Protection districts in Morrill. CMP has sited the new pole structures outside of the Wetland/Stream Protection districts associated with Simmons Brook, Poland Stream and the Unnamed Stream south of Poland Stream.

However, because of the size **and alignment** of the wetland to be spanned, five (5) H-frame structures cannot be sited entirely outside of the WSP District associated with the unnamed wetland in the southern part of town. Structures **#254-226 through #254-230 will be located on or near the zoning district boundary.**

See Revised Exhibit 4 and Revised Exhibit 5, Maps 2-5.

There are no reasonable alternatives for locating the five pole structures outside of this district. The amount of **permanent** ground disturbance associated with the five planned structures will be small (**25** sq ft per structure).

In addition to these five pole structures, two new pole structures will be located in the Limited Residential District adjacent to Smiths Millpond. **[It is anticipated that the LR District on Smiths Millpond will become Resource Protection District upon adoption of a revised shoreland zoning map in July 2010.]**

Since all seven of these the new structures will be co-located with the existing transmission line in the same corridor, locating structures within these areas causes the least overall impact when compared with the alternatives. Avoiding these districts would require expanding or moving the existing transmission line corridor. The overall environmental and visual impact associated with expanding the width of the existing corridor or moving the location of the corridor would be greater than the impact of the project as planned. Further, all along the corridor, including within the shoreland zone, CMP has identified natural resources (such as wetlands and significant wildlife habitats) and attempted to locate pole structures outside these resources and any associated buffers to the greatest extent practicable. This practice allows CMP to minimize impacts on surrounding resources. Finally, where unavoidable, construction in and adjacent to wetlands will be done in accordance with **Revised Exhibit 10, Environmental Guidelines** and **New Exhibit 11, Vegetation Management Practices**, which identify specific procedures to be followed to minimize impacts on wetlands **and other sensitive resources.**

M. Mineral Exploration and Extraction

Not applicable.

N. Agriculture

Not applicable.

O. Timber harvesting.

Not applicable.

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

Clearing is allowed for the development of permitted uses (**Ordinance Section 15 P(2)**).

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 Morrill, these species exist in a narrow band located between the existing transmission line and the natural gas pipeline, areas already cleared, and lie beneath the route of the new conductors.

See **Revised Exhibit 5, Maps 2-5**.

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.

Clearing of vegetation for construction and long term management of vegetation in the corridor will be done in accordance with **Revised Exhibit 10, Environmental Guidelines and New Exhibit 11, Vegetation Management Practices**.

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 is included as **Revised** Exhibit 10, Environmental Guidelines for Construction and Maintenance Activities on Transmission Line and Substation Projects. The guidelines include specifications for the installation and implementation of soil erosion and sedimentation control measures for CMP personnel, their representatives and contractors with a single, cohesive 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 manual was developed in consultation with the Maine Department of Environmental Protection and is 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 applicants' 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.

See New Exhibit 11, Vegetation Management Practices, and New Exhibit 12, Environmental Control Requirements for Contractors and Subcontractors of Central Maine Power Company – Oil and Hazardous Material.

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). Survey information about historic sites has been submitted to MHPC for review and recommendations. No NRHP-eligible sites were found in the Morrill shoreland zoning districts crossed by the CMP corridor.

PART C: APPROVAL CRITERIA

The Shoreland Zoning Ordinance contains eight 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 corridor. The transmission line corridor and the structures within it 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 in relation to Roads and Driveways, Storm Water Runoff, **Clearing or Removal of Vegetation for Activities Other Than Timber Harvesting**, Erosion and Sedimentation Control and Water Quality and supported by **Revised Exhibit 10 and New Exhibits 11 and 12**, 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 the existing service corridor, which has been in place for several decades. In general, given the existing landscape characteristics of the site, 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. **Additionally, New Exhibit 11, Vegetation Management Practices, outlines project practices required by the Department of Environmental Protection to protect fish and wildlife habitat.** Therefore, impacts to wildlife are expected to be minimal to non-existent.

More specifically, the following habitats have been identified in Morrill. As is explained below, none of the habitats will be adversely impacted by the proposed project.

Wading Bird and Waterfowl Habitat (Limited Residential District on Smiths Millpond and Wetland/Stream Protection District on Simmons Brook)

The shoreland area around Smiths Millpond, including the CMP corridor in the LR District and the Simmons Brook WSP District, has been identified as moderate value wading bird and waterfowl habitat (WWH) by the Department of Inland Fisheries and Wildlife (DIF&W). The CMP corridor includes about 5.5 acres of the 101 acre WWH (land acres). Within these acres one transmission line and a natural gas pipeline already exist; CMP proposes to add a new transmission line. Currently, a small strip of trees remains in the corridor between the existing transmission line and the pipeline. This strip, consisting of about one-half acre, will be cleared.

CMP routinely consults with DIF&W on proposed construction within WWHs. Within these areas construction is limited or prohibited during periods of breeding and nesting activity (e.g., between April 15 and July 15 of each year of construction) to minimize potential disruptions. The removal of the remaining strip of trees within the Smiths Millpond WWH will not adversely impact this habitat as surrounding areas are already cleared. In addition, installation of the

transmission line will not affect the ecological functioning of the habitat as the existing area is predominantly emergent and shrub vegetation that contains relatively few trees. This condition will continue to exist once the project is completed.

Fish Habitat (Simmons Brook, Poland Stream and Unnamed Stream)

To minimize any potential for negative impacts to stream habitat and fisheries, CMP proposes to allow vegetation to remain in place to the extent practicable and install appropriate sedimentation controls in accordance with Revised Exhibit 10, 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 25 feet of a stream (stream buffer). Vegetation removal for construction and vegetation maintenance in stream buffers will consist of removing those species that are capable of growing into the conductor safety zone (capable species). Non-capable streamside vegetation will be retained wherever possible and the natural regeneration of non-capable woody vegetation encouraged. In this way, the stream buffer will continue to function in a similar manner as before construction. Future vegetation maintenance in stream buffers will consist of hand removal capable species. The use of herbicides is not allowed in stream buffers.

Deer Wintering Areas (Wetland/Stream Protection District Unnamed Stream)

Approximately 0.2 acres of a 310 acre deer wintering area (DWA) are located within the WSP District associated with an unnamed stream. DIF&W has not designated this DWA as being either a moderate or high value DWA. As a result, this habitat is not considered to be significant wildlife habitat. No utility pole structures and no access ways will be located in the DWA in this district. A small strip of trees within the DWA, totaling approximately 0.02 acres, will be cleared. The removal of the few remaining trees in the transmission corridor on the edge of the DWA will not adversely impact the habitat as surrounding areas have already been cleared.

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

The proposed project will take place entirely within the existing transmission line corridor, which has been largely cleared of trees for the existing transmission line, the natural gas pipeline and the AT&T cable. Only the residual strip of trees located beneath the route of the new transmission line will be cleared of woody vegetation capable of growing into the conductor safety zone. Following construction, the corridor will be maintained to promote a permanent cover of cover of lower growing shrubs and herbaceous vegetation throughout, and tree removal within the 25 foot stream shores will be limited to species that are capable of growing into the conductor safety zone. 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 and historic resources within Morrill's shoreland zones.

7. Will avoid problems associated with flood plain development and use.

The transmission line corridor does not cross any designated federal flood hazard areas in Morrill (FEMA Flood Insurance Rate Map 01-07, Community #230262 A, effective September 18, 1985); nor does it include any recent flood plain soils as defined in the Ordinance (USDA Natural Resources Conservation Service, Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>).

8. 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.