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## **SECTION 19. FLOODING**

### **19.A Explanation of Flooding Impact**

In accordance with the “No Adverse Effect Standard” of the Site Location Law, the proposed Northeast Reliability Interconnect (NRI) transmission line will not cause or increase flooding or cause a flood hazard to any structure and will not have an unreasonable effect on runoff infiltration relationships. Of the four factors affecting runoff and infiltration (climate, topography, soil characteristics, and vegetative cover types), the only factor affected by the construction of the transmission line is the vegetative cover type. Generally, the conversion of forest cover to a scrub-shrub or early successional cover within the transmission line right-of-way (ROW) will improve the ability of the land to absorb runoff due to the increased density of the root mass associated with the resultant vegetative cover.

As discussed in Section 12, Stormwater Management, the hydrologic analysis performed for the Orrington Substation indicates that the proposed modifications will not have an unreasonable effect on the runoff infiltration relationships. The substation modifications will be designed, constructed, and maintained such that the flooding extent and frequency of flooding of downstream waterbodies will not be increased and the 100-year flood elevations will not be adversely affected.

### **19.B Federal Emergency Management Agency Mapping**

Q3 Flood Data are developed by the Federal Emergency Management Agency (FEMA) by scanning the existing hardcopy Flood Insurance Rate Maps (FIRMs), published by FEMA at a scale of 1:24000, and vectorizing a thematic overlay of flood risks. Q3 Flood Data files contain certain key features (e.g., areas inundated by 100-year flooding for which base flood elevations have been determined) from the existing hard copy FIRMs. Figure 19-1 presents an overlay of the boundaries of the Orrington Substation and the Q3 Flood Data. As shown on Figure 19-1, the Orrington Substation is not located within a mapped 100-year flood plain.

Figure 19-1. Orrington Substation FEMA Q3 Zone

Appendix 19-1 provides overlays of the proposed transmission line ROW and Q3 Flood Data that illustrate where the ROW crosses mapped flood zone areas in organized townships, namely the Towns of Orrington, Brewer, Holden, Eddington, Bradley, Princeton, and Baileyville. FIRMs have not been prepared for Great Pond Township and the following unorganized territories: T 32 MD, T 34 MD, T 35 MD, T 36 MD BPP, T 37 MD BPP, T 27 ED BPP, and No. 21 Township. The NRI transmission line crosses 19 areas with mapped 100-year flood plains. Thirteen transmission line structures (poles) would be located in these flood plain areas. Table 19-1 provides a listing of the areas with mapped 100-year flood plains crossed by the proposed transmission line, their approximate crossing widths, and structures that would be located in the mapped flood plains.

**TABLE 19-1.  
MAPPED 100-YEAR FLOOD PLAINS CROSSED BY THE NRI TRANSMISSION  
LINE**

<b>Stream/Wetland</b>	<b>Town</b>	<b>Approximate Crossing Width (feet)</b>	<b>Structure(s) within Mapped Flood Plains (structure no./type)<sup>1</sup></b>
Felts Brook (associated w/ wetland P3-002)	Brewer	350	20 W-LMA (P.I.)
Tributary (Trib) To Felts Brook (associated w/ wetland P3-004)	Brewer	500	25 W-DE (P.I.)
Eaton Brook (associated w/ wetland D3-012)	Holden	650	33 W-T (just north of wetland D3-012)
Trib to Eaton Brook (associated w/ wetland D3-04)	Eddington	800	48 W-T
Wetland K3-028	Eddington	1350	61 & 62 W-Ts
Meadow Brook	Eddington	250	—
Blackman Stream	Bradley	200	—
Wetland B4-98	Bradley	200	—
Wetland B4-99	Bradley	350	—
Boynton Brook (associated w/ wetland C4-91)	Bradley	400	98 W-T

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MAPPED 100-YEAR FLOOD PLAINS CROSSED BY THE NRI TRANSMISSION  
LINE**

<b>Stream/Wetland</b>	<b>Town</b>	<b>Approximate Crossing Width (feet)</b>	<b>Structure(s) within Mapped Flood Plains (structure no./type)<sup>1</sup></b>
Great Works Stream (associated w/ wetland B4-91)	Bradley	900	108 & 109 W-Ts
Baker Brook (associated w/ wetland B4-78)	Bradley	400	130 W-T
Little Birch Stream	Bradley	250	—
Trib to Little Birch Stream	Bradley	300	—
Allen Stream (associated w/ wetland A4-P3-029)	Princeton	700	537 W-T
Sawtelle Heath (Wetland B4-92)	Baileyville	900	590 W-T (between wetlands B4-92 & B4-93)
Wetland B4-95	Baileyville	900	593 W-T
Sprague Meadow Brook	Baileyville	200	—
St. Croix River	Baileyville	400	—

<sup>1</sup>Structure Type Identification:

P.I. = Point of Inflection

W-T = Wood Tangent Structure

W-LMA = Wood Light Medium Angle Structure

W-DE = Wood Dead-End Structure

There will be no increase in the incidence of flooding that results from the construction or operation of the project in these areas. In addition, the ability of the areas to retain flood waters and thereby reduce any potential damage will not be diminished. Existing topography and natural drainageways will not be altered and ground cover types will be managed in the ROW to promote the growth of shrubs and grasses. The project therefore will not create any increase in flooding.

**APPENDIX 19-1**  
**FEMA Q3 ZONE MAPS FOR THE TRANSMISSION LINE**