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SECTION 11. SOILS

11.A Soil Survey Map and Report

This section summarizes the soils which are traversed by the proposed Northeast Reliability Interconnect (NRI) right-of-way (ROW). This summary is based on existing United States Department of Agriculture (USDA) and Natural Resources Conservation Service (NRCS) soil survey data. The characteristics of soils expected to be encountered and the associated soil limitations along the proposed route are described herein based on available USDA and NRCS soil survey data for those counties crossed by the proposed route. No field surveys were performed along the ROW for the purpose of this discussion. In addition to anticipated conditions (which are extrapolated from the soil survey data), real conditions will be continually assessed during construction activities, and any areas of concern (erosion hazards, unstable soils, etc.) will be appropriately addressed as encountered in the field. The applicable USDA soil survey maps and soils series descriptions are included in the Class D Medium Intensity Soil Survey provided in Appendix 11-1. The proposed route for the NRI has been superimposed on the maps.

It should be noted that BHE also completed a Class C Medium High Intensity soil survey and a preliminary geotechnical study for the Orrington Substation expansion area. Based on the Class C soil survey, soils underlying the existing structure consist solely of Udorthents (fill), and soils in the area of the proposed expansion have been identified as Elmwood-Swanton complex. The Class C soil survey was used primarily for developing the storm water management plan for the substation expansion area. The geotechnical study was completed for project engineering purposes. The Class C soil survey and geotechnical study are provided as separate reports in Appendix 11-1.

The proposed NRI ROW passes through portions of Penobscot, Hancock, and Washington counties in Maine, totaling 84.25-miles in length. The route begins at the existing substation in Orrington and runs roughly northeasterly to the Canadian border in Baileyville.

The first approximately 22 miles lies within Penobscot County, where USDA/NRCS soil survey data are available. The route then leaves Penobscot County near milepost 22 and traverses through portions of Hancock County and Washington County that have no available soil survey data. Near milepost 74, the route enters into a portion of Washington County where soil survey data is again available and runs roughly northeasterly for another approximately 10 miles into Baileyville to the Canadian border. Soil survey maps depicting the proposed route through these areas are provided in Appendix 11-2. Soil survey data is not available for approximately 52 of the 84-mile route. A more detailed description of the proposed route for the transmission line ROW is provided in Section 1, Development Description.

The available USDA and NRCS soil survey data indicate that the route traverses 36 different soil series, associations or complexes (representing a total of 31 different soil series, with some found in various complexes and associations). These are further subdivided into 54 different map units based on features such as stone content and slope.

Appendix 11-3 of this report lists, in tabular format, each soil map unit as it is encountered along the proposed route, as well as a summarized description of each soil. The first column of the table lists the *Map Unit Symbol* (i.e., TvD, or 340B) representing the soil series crossed as depicted on the soil survey maps. The second, third, and fourth columns indicate mileage interval and distance along the route over which each soil unit is traversed. The *Map Unit Name* column lists the soil series. All of the data in Appendix 11-3 are taken from the USDA and NRCS survey information.

The *Range of Slope* column lists a range of slopes (i.e., 0-15 percent) relative to each soil map unit. The slope ranges listed herein are based solely on map unit designations and descriptions, and may vary in the field. Steep slopes may pose limitations relative to equipment access. Some areas with steep slopes may be subject to increased erosion hazard when disturbed. Some areas may require extra attention to erosion and sedimentation control during construction and restoration.

The *Drainage* column describes the drainage classification for the soil map unit. Soil drainage classes vary from very poorly drained to excessively drained. Drainage classes are associated with inherent parent material characteristics, soil texture, and topographical setting.

The *Soil Type* column provides a general description of the parent material in which each soil map unit is formed. The *Depth to Bedrock* column indicates whether the bedrock surface is generally greater than or less than 60 inches below the ground surface. The column *Water Table Depth* indicates the typical depth to groundwater during the wet season. The typical depth to seasonal high water table is directly related to the assigned drainage classification.

The next two columns list the range of *K factor*, which is an indication of the soil's surface susceptibility to sheet or rill erosion, and the *Erosion Hazard Potential (EHP)*. The K factor may range from 0.0 (non-erodible) to 1.0 (extremely erodible). A soil with a high K factor will be more susceptible to erosion and sediment control problems during the transmission line construction than a soil with a low K factor. The EHP indicates the woodland management erosion hazard potential based on the soil interpretation records.

The final column, *Hydric Soil*, identifies whether the soil type is considered to be a hydric soil. This information was derived from the NRCS Hydric Soils of Maine list. The list was created by using criteria that were developed by the National Technical Committee for Hydric Soils and are discussed further in Section 11.C Hydric Soils.

11.B Limitations Report

11.B.1 Soil Hazards

The main soil hazards that must be considered relative to the proposed installation are hydric soils (Section 11.C), erosion hazard potential, and shallow depth to bedrock. Soils with elevated erosion hazard potential may require control techniques beyond those typically employed during construction operations. Soils with shallow depth to bedrock may require hammering, drilling and/or blasting to accomplish pole installation. It should be noted that the size of the required

excavations for pole installation are usually only a few feet in width and depth. In most cases, erosion and shallow bedrock hazards can be overcome using special, yet common and feasible techniques.

In addition to hazards that have been identified based on published USDA and NRCS soil survey data, some unexpected impediments may be encountered in the field: for example, surface stoniness, boulders, ledge outcroppings, and dense gravel may impact the placement of utility structures. Such impediments will be appropriately addressed if and when they are encountered.

11.B.2 Soil Erosion

Erosion potential is listed as slight for the majority of the route that has available soil survey data; however, erosion and sedimentation control measures will be utilized wherever necessary to reduce the impact of any erosion during construction activities. BHE has developed an NRI Project Erosion and Sedimentation Control Plan (NRI E&S Plan or Plan) based on the best management practices (BMPs) contained in the Maine Department of Environmental Protection's (DEP) *Maine Erosion and Sediment Control BMPs*, dated March 2003. The NRI E&S Plan is provided in Appendix 14-1 of this application.

A total of 14.3 percent of the total linear distance of mapped soils identified along the proposed route are comprised of map units with "slight to moderate" and higher erosion hazard ratings. Table 11-1 lists the map units that are associated with elevated erosion hazard, their locations along the route, and their erosion hazard ratings.

TABLE 11-1. SUMMARY OF SOILS WITH ELEVATED EROSION HAZARD POTENTIAL ALONG ROUTE[1]

Map Unit Symbol	Map Unit Name	Erosion Hazard	From (milepost)	To (milepost)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
					Total Distance (feet)	
Lk	Limerick (Charles)	Moderate to severe	12.03	12.06	200	
					200	***0.12%***
PgC	Plaisted	Slight to moderate	5.25	5.31	304	
					304	***0.18%***
PrE	Plaisted	Moderate to severe	5.99	6.05	280	
			7.27	7.39	606	
					885	***0.52%***
RmC	Rockland & Thorndike	Slight to moderate	11.86	11.95	513	
			12.06	12.10	214	
			19.31	19.36	270	
					998	***0.59%***
RmD	Rockland & Thorndike	Slight to moderate	11.79	11.86	354	
			11.95	12.01	321	
			12.10	12.17	352	
					1027	***0.61%***
Sa	Saco (Medomak)	Moderate to severe	9.72	9.77	283	
			9.79	9.80	85	
			15.41	15.47	346	
			20.14	20.18	212	
					925	***0.55%***
SfC	Stetson & Suffield	Moderate	18.56	18.83	1400	
			19.00	19.14	757	
					2157	***1.28%***
SuC2	Suffield eroded	Moderate to severe	9.80	9.86	312	
					312	***0.18%***
SvC	Suffield	Moderate to severe	5.42	5.50	424	
					424	***0.25%***
TkB	Thorndike	Slight to moderate	7.05	7.21	857	

TABLE 11-1. SUMMARY OF SOILS WITH ELEVATED EROSION HAZARD POTENTIAL ALONG ROUTE[1]

Map Unit Symbol	Map Unit Name	Erosion Hazard	From (milepost)	To (milepost)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
					Total Distance (feet)	
					857	***0.51%***
TvB	Thorndike	Slight to moderate	12.26	12.32	305	
			15.29	15.38	441	
			21.04	21.12	424	
			21.38	21.45	388	
			21.94	22.01	380	
					1939	***1.15%***
TvC	Thorndike	Slight to moderate	19.83	19.86	197	
					197	***0.12%***
340B	Telos-Elliottsville-Monarda complex	Slight to moderate	74.39	74.50	562	
			74.57	74.60	159	
			76.46	76.78	1683	
			77.20	77.34	763	
			77.46	77.59	644	
			79.27	79.39	614	
					4425	***2.62%***
340C	Chesuncook-Elliottsville-Telos complex	Slight to moderate	74.78	74.99	1093	
			75.04	75.53	2577	
			75.62	75.71	477	
			75.79	76.29	2674	
			77.43	77.46	208	
			77.67	77.76	464	
			77.83	77.91	402	
					7896	***4.68%***
344C	Danforth-Elliottsville complex	Slight to moderate	81.18	81.47	1539	
					1539	***0.91%***
Total Measured Distance of Shallow Soils					***24,084***	***14.28%***
Total Measured Distance					***168,687***	***14.28%***

[1] Includes only those soils with "slight to moderate" and greater erosion hazard ratings.

11.B.3 Shallow Depth to Bedrock

The majority of the mapped portion of the proposed route crosses soils that are listed as "very deep;" i.e., they have greater than 60 inches of soil over bedrock. Of the total linear distance of mapped soils along the route, 11.7 percent are comprised of map units listed as having shallow depths to bedrock. Table 11-2 lists these map units, their locations along the proposed route, and their depth to bedrock estimates.

TABLE 11-2. SUMMARY OF SHALLOW SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
					Total Distance (feet)	
RmC	Rockland & Thorndike	0-12	11.86	11.95	513	
			12.06	12.10	214	
			19.31	19.36	270	
					998	***0.59%***
RmD	Rockland & Thorndike	0-12	11.79	11.86	354	
			11.95	12.01	321	
			12.10	12.17	352	
					1027	***0.61%***
TkB	Thorndike	0-20	7.05	7.21	857	
					857	***0.51%***
TvB	Thorndike	10-20	12.26	12.32	305	
			15.29	15.38	441	
			21.04	21.12	424	
			21.38	21.45	388	
			21.94	22.01	380	
					1939	***1.15%***
TvC	Thorndike	10-20	19.83	19.86	197	
					197	***0.12%***

TABLE 11-2. SUMMARY OF SHALLOW SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
					Total Distance (feet)	
340B	Telos-Elliottsville-Monarda complex	20-40	74.39	74.50	562	
			74.57	74.60	159	
			76.46	76.78	1683	
			77.20	77.34	763	
			77.46	77.59	644	
			79.27	79.39	614	
					4425	***2.62%***
340C	Chesuncook-Elliottsville-Telos complex	20-40	74.78	74.99	1093	
			75.04	75.53	2577	
			75.62	75.71	477	
			75.79	76.29	2674	
			77.43	77.46	208	
			77.67	77.76	464	
			77.83	77.91	402	
					7896	***4.68%***
341C	Elliotsville-Monson	10-40	75.53	75.62	476	
			75.71	75.79	400	
					876	***0.52%***
344C	Danforth-Elliottsville complex	20-40	81.18	81.47	1539	
					1539	***0.91%***
Total Measured Distance of Shallow Soils					***19,753***	***11.71%***
Total Measured Distance					***168,687***	***11.71%***

11.C Hydric Soils

Hydric soil is defined as a soil that has formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. These soils can pose limitations due to seasonal or year-round wetness. Some hydric soils can be compacted if exposed to heavy equipment when wet. Those soils that are associated with wetlands are under state and/or federal jurisdiction. Often, the limitations associated with hydric soils can be circumvented by conducting operations during dry or frozen seasons, or by using BMPs. Applicable BMPs are incorporated in the NRI E&S Plan (Appendix 14-1). These practices will be adhered to whenever necessary during construction of the proposed line.

Of the total linear distance of mapped soils along the proposed route, 55.4 percent is comprised of map units that are listed as hydric. Table 11-3, below, lists these map units and the locations where they occur along the route.

TABLE 11-3. SUMMARY OF HYDRIC SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Hydric Soil (Y or N)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
					Total Distance (feet)	
BoA	Biddeford	Y	0.95	1.59	3417	
			2.73	2.84	578	
			2.96	3.07	584	
			3.39	3.50	618	
			4.54	4.62	383	
			5.58	5.66	422	
			5.73	5.79	286	
			8.20	8.41	1127	
			8.52	8.67	797	
			9.06	9.19	701	
			9.30	9.44	786	
			10.10	10.15	269	
			10.31	10.59	1446	
			10.69	10.81	616	
			11.06	11.08	101	
(BoA Continued…)			11.32	11.47	788	

TABLE 11-3. SUMMARY OF HYDRIC SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Hydric Soil (Y or N)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	Percent of Total Measured Distance
					Total Distance (feet)	
			11.63	11.73	532	
			13.17	13.34	906	
			17.44	17.53	467	
			17.63	17.68	293	
			21.58	21.90	1695	
					16,810	***9.97%***
BxB	Buxton, Scantic, & Biddeford	Y	3.72	3.78	295	
			4.12	4.15	180	
			4.30	4.32	89	
			5.10	5.14	212	
			5.39	5.42	144	
			5.84	5.97	678	
			6.05	6.25	1085	
			6.40	6.50	530	
			7.02	7.05	143	
			7.87	8.20	1733	
			8.41	8.46	259	
			8.67	9.06	2059	
			10.59	10.69	566	
			10.81	11.01	1060	
			11.08	11.17	496	
			11.73	11.75	65	
			13.76	13.97	1110	
			14.11	14.19	426	
			14.90	15.03	637	
			15.47	15.87	2095	
			16.91	16.98	414	
			19.38	19.47	466	
			19.62	19.69	332	
			20.09	20.14	232	
			20.18	20.32	769	
			20.35	20.67	1691	
			21.90	21.94	223	
			22.01	22.04	141	
					18,129	***10.75%***

TABLE 11-3. SUMMARY OF HYDRIC SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Hydric Soil (Y or N)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	
					Total Distance (feet)	***Percent of Total Measured Distance***
Lk	Limerick (Charles)	Y	12.03	12.06	200	
					200	***0.12%***
MrB	Monarda & Burnham	Y	7.39	7.42	190	
			7.64	7.87	1209	
			12.39	12.49	480	
			12.65	12.84	1040	
			12.96	13.06	502	
			13.60	13.76	874	
			14.19	14.48	1550	
			15.96	16.13	882	
			16.23	16.34	597	
			17.33	17.44	586	
			19.47	19.58	546	
			19.78	19.83	257	
			19.86	19.92	273	
			20.67	20.83	847	
			21.12	21.27	775	
			21.50	21.58	434	
					11,041	***6.55%***
MsC	Monarda & Burnham	Y	6.90	7.02	644	
			11.01	11.06	239	
			11.75	11.79	222	
			12.17	12.26	491	
			12.32	12.39	382	
			19.36	19.38	132	
					2110	***1.25%***
Mu	muck	Y	11.47	11.63	871	
					871	***0.52%***
Pa	Peat & Muck	Y	17.53	17.63	520	
					520	***0.31%***
RaB	Red Hook & Atherton	Y	16.98	17.15	868	
			17.68	18.01	1727	
					2595	***1.54%***

TABLE 11-3. SUMMARY OF HYDRIC SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Hydric Soil (Y or N)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	Percent of Total Measured Distance
					Total Distance (feet)	
Sa	Saco (Medomak)	Y	9.72	9.77	283	
			9.79	9.80	85	
			15.41	15.47	346	
			20.14	20.18	212	
					925	***0.55%***
ScB	Scantic	Y	0.22	0.55	1730	
			1.76	1.93	908	
			2.68	2.73	274	
			4.96	5.10	752	
			6.50	6.82	1699	
			6.85	6.90	238	
			9.50	9.63	702	
			10.15	10.31	881	
			11.17	11.32	783	
			12.49	12.57	461	
			14.48	14.68	1040	
			15.16	15.29	696	
					10,165	***6.03%***
332B	Lamoine-Buxton-Scantic complex	Y	83.44	83.53	498	
			83.68	83.71	108	
			83.73	83.87	735	
					1341	***0.80%***
333A	Scantic-biddeford association	Y	83.71	83.73	140	
					140	***0.08%***
340B	Telos-Elliottsville-Monarda complex	Y	74.39	74.50	562	
			74.57	74.60	159	
			76.46	76.78	1683	
			77.20	77.34	763	
			77.46	77.59	644	
			79.27	79.39	614	

TABLE 11-3. SUMMARY OF HYDRIC SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Hydric Soil (Y or N)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	Percent of Total Measured Distance
					Total Distance (feet)	
					4425	***2.62%***
340C	Chesuncook - Elliottsville-Telos complex	Y	74.78	74.99	1093	
			75.04	75.53	2577	
			75.62	75.71	477	
			75.79	76.29	2674	
			77.43	77.46	208	
			77.67	77.76	464	
			77.83	77.91	402	
					7896	***4.68%***
348B	Monarda-Telos association	Y	74.50	74.57	379	
			74.99	75.04	278	
			76.29	76.46	879	
			76.78	76.87	505	
			76.96	77.06	533	
			77.59	77.67	443	
			77.76	77.83	392	
			77.91	78.21	1606	
			78.53	78.83	1594	
			78.97	79.00	161	
			79.07	79.27	1098	
			79.39	79.93	2857	
			80.08	80.21	703	
			80.31	80.41	565	
			80.50	80.61	623	
			80.79	80.84	300	
			82.20	82.23	180	
			82.30	82.36	290	
			82.48	82.54	326	
			82.91	82.95	249	
					13,960	***8.28%***

TABLE 11-3. SUMMARY OF HYDRIC SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Hydric Soil (Y or N)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	
					Total Distance (feet)	***Percent of Total Measured Distance***
39M	Wonsqueak and Bucksport: frequently flooded	Y	81.99	82.20	1064	
			83.38	83.44	305	
					1369	***0.81%***
39P	Bucksport and Wonsqueak	Y	80.84	81.04	1015	
					1015	***0.60%***
Total Measured Distance of Shallow Soils					***93,512***	***55.44%***
Total Measured Distance					***168,687***	***55.44%***

11.D Wetland Investigation Report

11.D.1 Introduction

This section presents the results of the field investigation of wetlands located within or immediately adjacent to the proposed ROW in Penobscot, Hancock, and Washington counties. The purpose of the investigation was to determine the presence and extent of areas within the proposed project corridor that meet the criteria for federal and state jurisdictional wetlands according to the United States Army Corps of Engineers (Corps) guidelines (Section 404 of the Clean Water Act) and DEP's Natural Resources Protection Act (NRPA) (38 MRSA §§ 480-A to 480-Z) and Chapter 310 NRPA Wetland Protection Rules. Wetland scientists conducted the majority of wetland delineations during the Fall of 2004.

A wetland summary table that provides wetland impact acreages, wetland area converted from forested to scrub-shrub or emergent wetland types, any criteria that are met for designation as a

freshwater wetland of special significance (FWSS), and the type of structure located in the wetland, if any, is provided in Appendix 11-6. Representative data forms and photographic documentation of representative wetland community types is provided in Appendix 11-5. In addition, a complete set of full-sized Plan and Profile drawings of the proposed ROW, which includes delineated wetland boundaries, is provided with this application.

11.D.2 Methods

Identification of wetland and stream resources within the study area was done using a two-phase approach. First, the wetland resources along the route were studied through use of available National Wetland Inventory (NWI) maps, NRCS soil surveys, and existing wetland mapping associated with the Maritimes & Northeast Pipeline project. Second, field delineation of all the wetlands crossed by the route was conducted in compliance with state and federal requirements. Wetland scientists conducted the majority of wetland delineations during the Fall of 2004.

Wetland delineations were performed using the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987). The "routine on-site determination method" was selected as the most appropriate delineation technique. Wetlands were considered present when observations of vegetation, hydrology, and soils indicated that the three parameter criteria for wetland identification were met. Wetland/upland boundaries were flagged in most locations and the wetland boundaries were located using a Global Positioning System (GPS). Soils were classified according to *Field Indicators for Identifying Hydric Soils in New England* (New England Hydric Soils Technical Committee 1998). All wetlands were classified using the United States Fish and Wildlife Service's (USFWS) wetland classification system (e.g., PFO1) (Cowardin et. al. 1979).

During the wetland field effort, any perennial or intermittent waterbody crossings were also noted. Waterbody crossings were classified according to the Land Use Regulation Commission's (LURC) Chapter 10 Land Use Districts and Standards. Waterbodies were either classified as *major* or *minor* according to these standards. Major waterbodies are defined as "flowing water downstream from a point where such water drains 50 square miles" (e.g.,

Narraguagus River). Minor waterbodies are defined as "flowing water upstream of a point where such water drains less than 50 square miles" (e.g., Meadow Brook).

11.D.3 Results of Field Investigations

Because the proposed NRI route is located adjacent to existing ROWs and within predominately forested areas, the majority of wetland cover types along the route are palustrine forested and scrub-shrub wetlands (approximately 292.89 acres or 86.5 percent of all wetlands crossed by the project) (see Section 7, Wildlife and Fisheries, Table 7-1). Wetland crossing locations and impacts were determined from the project Plan and Profile drawings on which the GPS data locating wetland boundaries and proposed clearing limits of the project were plotted.

No wetlands will be permanently or temporarily impacted as a result of construction or operations at the Orrington Substation and the proposed ROW has been sited such that there will be no loss of wetland acreage, except for the insignificant amount that occurs where a structure (pole) is set. As shown on the project Plan and Profile drawings and on the Wetland Summary Table (Appendix 11-6), structure locations were sited to the maximum extent practicable to be outside of wetlands. Therefore wetland impacts from the project will be either temporary in nature or the result of conversion of forested wetland to scrub-shrub or emergent wetland types along the ROW. Furthermore, there will be no permanent loss of functions of these wetlands. In addition, siting the route to be co-located with existing ROWs, to the maximum extent practicable, effectively reduces the total amount of forested wetland affected by the project. As such and consistent with other utility projects in Maine, no wetland mitigation plan has been developed for this project. Section 11.D.10 and Appendix 11-6 provide complete tabulation of all wetlands affected by construction and operation of the project.

11.D.4 Forested Wetlands

Palustrine Forested System (PFO)

Forested wetland affected by this project will be needle-leaved evergreen or broad-leaved deciduous. Generally, these forested wetlands consist of seasonally flooded/saturated conditions. Wildlife habitat and groundwater discharge are the principal functions associated with forested wetlands.

Needle-leaved Evergreen (PFO4)

Evergreen wetlands are dominated by 20- to 50-foot-high needle-leaved or scale-leaved trees growing in peat or mineral soils. The dominant tree species of evergreen wetlands are balsam fir (*Abies balsamea*) and red spruce (*Picea rubens*), and are otherwise known as spruce-fir swamps. The herbaceous layer tends to be quite sparse with herbs such as goldthread (*Coptis groenlandica*) being locally common. This community tended to be located along stream and bog margins.

Another evergreen community sparingly found along the route consists of the northern white cedar (*Thuja occidentalis*) swamp. These areas can consist of mixed stands of cedar, balsam fir, and red maple (*Acer rubrum*). This community is relatively common in poorly drained basins along streams or small ponds (Maine Natural Areas Program [NAP] 2001). The shrub layer is typically sparse, but with high diversity of bryophytes and herbs. Because these communities occur in more alkaline conditions than other evergreen wetlands, several botanical features such as calciphilic (i.e., calcium loving) orchids may be found in these habitats. Sawtelle Heath in Baileyville includes a white cedar component.

Another forested wetland community found along the route consists of the spruce-larch wooded bog. This community can consist of black spruce (*Picea mariana*) and/or American larch (*Larix laricina*) trees growing over typical bog vegetation of ericad shrubs, graminoids, and peat mosses. Typically, canopy closure is usually less than 50 percent. Dwarf shrubs, herbs, and tree

regeneration cover the ground, and peat mosses form close to 100 percent cover. These areas are nutrient poor, and may occur as part of fens (NAP 2001).

Broad-leaved Deciduous (PFO1)

The broad-leaved deciduous wetlands along this route were primarily red maple-sensitive fern (*Onoclea sensibilis*) swamps. This forested wetland type occurred on poorly drained basins or small depressional areas in close association with drainage channels, or on floodplains of medium-sized streams to small rivers (NAP 2001). Standing water and surface saturation is common throughout the growing season. The shrub layer typically consisted of northern arrow-wood (*Viburnum recognitum*), winterberry (*Ilex verticillata*), and red maple saplings. The diverse herbaceous layer consisted of sensitive fern, cinnamon fern (*Osmunda cinnamomea*), bluejoint (*Calamagrostis canadensis*), manna grass (*Glyceria obtusa*), and various sedge species (*Carex* species [spp.]). Broad-leaved deciduous wetlands were found throughout the project area, specifically on floodplains of the Dead Stream and Machias River.

11.D.5 Scrub-Shrub Wetlands

Palustrine Scrub-Shrub System (PSS)

Scrub-shrub wetlands are dominated by woody vegetation less than 20 feet tall, including true shrubs, young trees, and trees and shrubs that are small or stunted because of environmental conditions (Cowardin et al. 1979). Community equilibrium in this wetland type varies from relatively stable “climax” shrub communities under wetter conditions, to regenerating forested wetlands recently disturbed by activities such as logging. The scrub-shrub communities found along this route were seasonally flooded and often saturated to the surface throughout the growing season and soils ranged from mineral to organic. The principal wetland functions associated with these scrub-shrub wetlands consist of wildlife habitat and sediment stabilization. The three general types of scrub-shrub wetlands that occur in the region are inland fresh meadows, scrub-shrub wetlands associated with streams, and peatland bogs.

Broad-leaved Deciduous (PSS1)

Broad-leaved deciduous scrub-shrub wetlands encountered along the proposed ROW were usually associated with waterbodies, in wet depressions, along the fringes of emergent wetlands, and in the transition zones between emergent wetlands and upland communities. Soils were usually mineral or muck and hydrology ranged from seasonally and semi-permanently saturated, to seasonally flooded. The dominant species of shrubs in these wetlands along the proposed ROW typically included speckled alder (*Alnus incana*), steeple-bush (*Spiraea tomentosa*), willow species (*Salix* spp.), highbush blueberry (*Vaccinium corymbosum*), mountain holly (*Nemopanthus mucronatus*), northern arrow-wood and winterberry. Depending on the density of shrub cover, the herbaceous layer ranged from sparse to dense, and common species include joe-pye-weed (*Eupatorium maculatum*), boneset (*E. perfoliatum*), blue vervain (*Verbena hastata*) and various graminoids.

Needle-leaved Evergreen (PSS4)

Another scrub-shrub wetland found along the route consisted of needle-leaved evergreen species and are dominated by small or stunted individuals of species such as balsam fir, northern white cedar, and red, white, or black spruce. Also, often intermixed with these species, is the needle-leaved deciduous American larch. This wetland type, in areas crossed by the project, were typically found in semi-permanently saturated organic soils that occur in cool, poorly drained depressions, or in seasonally saturated mineral soils. Many of the wetlands in this class are fed by springs, or enriched by the seepage of cold, minerotrophic groundwater. Deciduous shrubs, such as leatherleaf (*Chamaedaphne calyculata*), sheep laurel (*Kalmia angustifolia*), wild raisin (*Viburnum cassinoides*), and red-osier dogwood (*Cornus stolonifera*), may comprise a significant component of the shrub cover. Characteristic herbs are cinnamon fern, goldthread, cotton grasses (*Eriophorum* spp.), and creeping snowberry (*Gaultheria hispidula*).

Percent cover of shrubs within this wetland type is variable, ranging from around 50 percent in the more stable communities on wetter sites, to 80 to 90 percent in regenerating coniferous communities on drier sites.

11.D.6 Emergent Wetlands

Palustrine Emergent System (PEM)

The emergent wetlands along the route typically consisted of tussock sedge (*Carex stricta*) meadow, mixed graminoid-shrub marsh, and cattail (*Typha latifolia*) marsh. The principal wetland functions found in association with the emergent wetlands included wildlife habitat, sediment retention, and sediment stabilization.

Emergent Marsh (PEM1)

Sedge meadow communities are typically seasonally flooded/saturated areas with standing water through much of the growing season with organic soils (NAP 2001). Tussock sedge, bluejoint grass, and woolgrass (*Scirpus cyperinus*) usually dominated this community. All three of these species were usually associated with monotypic stands (up to four feet in height) that were common throughout the route. In general, these wetlands were found along slow moving streams, shrub bog margins, and swales between small hills.

The mixed graminoid-shrub marsh community found along the route typically consisted of grasses and sedges on mineral soils (NAP 2001). Species associated with this wetland type included bluejoint grass, fowl manna grass, and wool grass. Shallow sedge (*Carex lurida*), fringed sedge (*Carex crinita*), broom sedge (*Carex scoparia*), sensitive fern, and bluejoint were also frequently encountered. This community also consisted of a sparse shrub layer dominated by meadowsweet. These primarily graminoid communities were usually located along stream channels and culverted areas where scouring limits the development of peat. In addition, this community was also associated with beaver flowage areas within temporarily-ponded forested wetlands.

The cattail marsh communities along the route were located in basins or depressions along slow moving streams or in large isolated depressions where past disturbance was evident. Shrub communities consisting of speckled alder and meadowsweet were frequently associated with the

cattail wetlands. Representative cattail communities were found along the existing ROW near the Orrington Substation.

11.D.7 Unconsolidated Bottom Wetlands

Palustrine Unconsolidated Bottom (PUB and PUBb)

Unconsolidated bottom wetlands are characterized by a lack of large stable surfaces for plant and animal attachment with less than 25 percent cover of particles smaller than stones and less than 30 percent cover by vegetation. They basically consist of open water with small amounts of emergent and submergent plants. Wetlands classified as PUBb are unconsolidated bottom wetlands that have been created or modified by the action of beaver. In these types of wetlands, visible hydrologic changes have occurred as a result of beaver activity. The principal functions of unconsolidated bottom wetlands along the route included wildlife habitat, groundwater recharge and, floodflow alteration.

11.D.8 Functions and Values

Through the pre-application process it was determined that detailed functional assessments were not required for each wetland impacted by construction of the proposed project. Due to the nature of the proposed project, all impacts to wetlands will be temporary or result only in a change in cover type, and there will be no permanent loss of functions and values. The following section provides a general presentation of the principal functions and values of wetlands, by class, for wetland impacts along the proposed ROW. The functions and values presented below, are based on a descriptive, best professional judgment approach, with reference to the methodology recommended by the Corp's New England District – *The Highway Methodology Workbook Supplement: Wetland Functions and Values - A Descriptive Approach* (Corps Highway Methodology) (Corp's 1999). Thirteen wetland functions and values are recognized under the Corps methodology:

- Groundwater Recharge/Discharge
- Floodflow Alteration (Storage & Desynchronization)
- Fish and Shellfish Habitat
- Sediment/Toxicant Pathogen Retention
- Nutrient Removal/Retention/Transformation
- Production Export (Nutrient)
- Sediment/Shoreline Stabilization
- Wildlife Habitat
- Recreation (Consumptive & Non-Consumptive)
- Educational/Scientific Value
- Uniqueness/Heritage
- Visual Quality/Aesthetics
- Threatened or Endangered Species Habitat

The Corps Highway Methodology provides a list of considerations and qualifiers that are used to assess occurrence of each function or value, followed by a subjective determination of Principal Functions and Values, with documentation of supporting rationale on standard forms. The list of considerations and qualifiers are used in the function and values assessment of each wetland class, although a narrative approach is employed in lieu of the standard forms.

Palustrine Forested Wetlands

Forested wetlands are the dominant wetland class along the proposed route and within the region. Most are dominated by needle-leaved evergreen trees (softwoods), including balsam fir, red spruce, black spruce, and hybrids between these two species, American larch, and northern white cedar. (Additional discussion of northern white cedar swamps is provided below.) Broad-leaved deciduous trees (hardwoods), especially red maple, black ash (*Fraxinus nigra*), and gray birch (*Betula populifolia*) are also present but are seldom dominant; only a few deciduous forested swamps were noted in the vicinity of the project. Depending on the density of the crown cover, a shrubby understory can be moderately well developed, although in this region it is often nearly lacking. Ground-layer herbs are frequently sparse (due to shade) but there is

often a well-eveloped moss layer, including *Sphagnum* moss in patches. The ground surface typically had a "hummock-hollow" micro-relief. Drainage patterns varied from non-existent to well-defined.

The basic recognized functions and values of forested wetlands of this region are for stormwater and meltwater storage, stream and watershed protection, water quality maintenance and wildlife habitat. They may also, in areas of fractured bedrock, help in groundwater recharge. These wetlands would be well-suited for trapping sediments or nutrients; however, there is typically little input because the area is mostly naturally and heavily vegetated (in contrast to agricultural or urbanized areas which generate large sediment and nutrient loads). They are generally not significant for other recognized functions and values. Forested wetlands will be converted primarily to scrub-shrub wetlands as result of this project. However, it is important to note that these areas will still maintain their primary functions as the hydrology of these systems will not be altered.

Forested Wetlands - Northern White Cedar Swamps

This subclass of forested wetlands is dominated by northern white cedar and is indicative of slightly enriched, typically calcareous, soils. Functions and values overall are the same as for other forested swamps: stormwater storage, stream protection, water quality maintenance and wildlife habitat. However, they are more likely to have a groundwater discharge function. Such seepage swamps are less likely to provide a stormwater storage function, although other cedar swamps have topography that would provide storage. Northern white cedar swamps will be converted primarily to scrub-shrub wetlands as result of this project, dominated by cedar saplings. However, it is important to note that these areas will still maintain their primary functions as the hydrology of these systems will not be altered.

Scrub-Shrub Wetlands (exclusive of peatlands)

Scrub-shrub wetlands are generally associated with the fringes of emergent wetlands and medium-sized to large streams or small rivers. Scrub-shrub wetlands are usually wetter than

forested wetlands, often with seasonal standing water and a longer hydroperiod. Drainage patterns are normally well established.

Scrub-shrub wetlands in general have functions similar to forested wetlands. Because they often receive over bank flooding they are significant in flood alteration, and often protect stream banks from erosion. They can provide a similar stream course and watershed protection, but because they are of lesser extent than forested wetlands, are probably less significant overall for this function. They may, however, be more productive in terms of food resources. Because they were usually more structurally diverse, they appeared to support a different and typically more diverse suite of associated wildlife species than forested wetlands. This was especially true because they were often associated with streams that can act as wildlife corridors.

Scrub-Shrub Wetlands - Peatlands (bogs and fens)

A particular type of wetland frequent in the region is the peat-accumulating bog or heath. These often occur in small kettleholes associated with esker systems; alternatively, they occur in broader basins where they may be very large. Some peatlands associated with groundwater discharge or higher nutrient (especially calcium) levels are known as fens. Bogs are highly acidified environments, usually dominated by *Sphagnum* mosses and by dwarf shrubs of the heath family such as sheep laurel (*Kalmia angustifolia*), leatherleaf, and rhodora (*Rhododendron canadense*). Fens have a more diverse plant community that is usually dominated by non-*Sphagnum* mosses, sedges, and other graminoids (*Scirpus* spp., *Eriophorum* spp.).

Functions and values of peatlands are somewhat different than those of other wetlands when evaluated by criteria outlined in the Corps Highway Methodology. They are generally more self-contained than other wetlands, and primary production is often limited due to poor nutrition. However, they may perform groundwater recharge, organic retention, nutrient removal, and other functions. Also, they are widely considered “unique” and, because they are often prominent in the landscape they are aesthetically pleasing. Fens may support a number of rare plant species. No fen areas were identified along the proposed corridor.

Emergent Wetlands

There are few large emergent areas along the proposed route. The following discussion therefore pertains to beaver meadow type areas that occur along small streams that will be crossed, or to open areas under the existing power lines that would otherwise be forested wetlands. Because they are generally small in extent and because beaver dams are not permanent, these wetlands are generally not significant for meltwater, floodwater or stormwater storage. However, because of the vegetative structure, with normally dense, erect emergent vegetation, they are often important for trapping sediments and nutrients within the system, and for erosion control. They can be quite productive (especially invertebrates), and may supply a large amount of food into the system. Therefore they are significant for wildlife and often support wildlife in greater concentrations than other wetland classes. They are important fisheries habitats as well. Other wetlands functions and values are limited.

Palustrine Unconsolidated Bottom (PUB and PUBb)

A very small fraction of the wetlands located within the proposed NRI ROW (total of 5 wetlands) were classified as unconsolidated bottom wetlands. These wetland communities were typically found along or adjacent to major waterbodies. A representative PUB wetland was identified along Stud Mill Road where the connecting waterbody flows between Lower Sabao Lake and Burnt Land Lake. The principal functions of unconsolidated bottom wetlands along the route included wildlife habitat, groundwater recharge and floodflow alteration.

11.D.9 Freshwater Wetlands of Special Significance

Wetlands occurring along the project route were designated as FWSS if they met at least one of the eight criteria specified by NRPA's Wetland Protection Rules (Chapter 310 § 4(A)). The project crosses 112 wetlands meeting at least one of the eight criteria, 41 of which meet more than one criterion. These areas are randomly located along the ROW and are well dispersed throughout. A summary of wetlands meeting the criteria for FWSS is presented below in Table 11-4.

TABLE 11-4. SUMMARY OF WETLANDS DESIGNATED AS FWSS ALONG ROUTE

Maine State Criteria[1]	Number of NRI Wetlands Meeting Criteria
4(A)(1)	3
4(A)(2)	58
4(A)(3)	0
4(A)(4)	14
4(A)(5)	3
4(A)(6)	22
4(A)(7)	7
4(A)(8)	63

Notes:

[1] Freshwater Wetlands of Special Significance (FWSS) are defined by the DEP in Chapter 310 Wetland Protection Rules pursuant to NRPA (NRPA – 38 M.R.S.A. § 480-A to 480-Z). Wetlands occurring along the project route were designated as FWSS if they met one of the eight criteria specified in Chapter 310 Rules (Chapter 310 § 4(A)), as explained in the key below:

KEY:

4(A)(1) = The digital shapefile data from the NAP was used to determine whether the wetlands contained a natural community that is critically imperiled (S1) or imperiled (S2) as defined by NAP (Chapter 310 § 4(A)(1)).

4(A)(2) = Digital data from the Maine Department of Inland Fisheries and Wildlife (DIFW) was used to determine whether the wetlands met the criterion of "significant wildlife habitat". The freshwater wetland contains significant wildlife habitat as defined by 38 M.R.S.A. § 480-B(10)" (Chapter 310 § 4(A)(2)).

4(A)(3) = None of the wetlands are located within the coastal zone to qualify as within 250 feet of a coastal wetland. Therefore, this characteristic of a FWSS does not apply to freshwater wetlands in the project area.

4(A)(4) = Digital data from United States Geological Survey (USGS) quad sheets, Maine Office of GIS (MEOGIS) 24k pond shapefiles, and the lacustrine attribute found in NWI shapefiles were used to determine whether wetlands were, "located within 250 feet of the normal high water line, and within the same watershed, of any lake or pond classified as GPA under 38 M.R.S.A. § 465-A" (Chapter 310 § 4(A)(4)).

4(A)(5) = NWI wetlands designated as PAB (Palustrine Aquatic Bottom) or Riverine were considered FWSS under the criterion, "Aquatic vegetation, emergent marsh vegetation, or open water. The freshwater wetland contains under normal circumstances at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, unless the 20,000 or more square foot area is the result of an artificial ponds or impoundment" (Chapter 310 § 4(A)(5)).

4(A)(6) = For the criterion, "Wetlands subject to flooding. The freshwater wetland area is inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency (FEMA) or other site-specific information" (Chapter 310 § 4(A)(6)). FEMA digital and hardcopy maps were used to determine the wetland's location in relation to the 100-year flood elevation.

4(A)(7) = The peatlands criterion is defined as freshwater wetlands that are or contain peatlands, except that the DEP may determine that a previously mined peatland, or portion thereof, is not a wetland of special significance (Chapter 310 § 4(A)(7)). To determine this evaluation criteria the "Ba" modifier in NWI shapefiles attribute column was used to determine peatlands. The "Ba" modifier signifies that the wetland is a peatland.

4(A)(8) = The MEOGIS 24k rivers and streams shapefiles were used to determine the criterion, "river, stream, or brook. The freshwater wetland area is located within 25 feet of a river, stream, or brook" (Chapter 310 § 4(A)(8)). A 25-foot buffer was created at the edge of the river or stream shapefiles and any wetlands within the buffer were labeled as FWSS.

Of the total FWSS crossed by the project, three (less than one percent of all wetlands crossed by the project) were classified as critically imperiled or imperiled communities, 58 (15 percent) were considered significant wildlife habitat, 14 (four percent) were located near a lake or pond classified as GPA under 38 M.R.S.A. § 465-A, three (less than one percent) contained the specified amount of aquatic vegetation, emergent marsh vegetation, or open water, 22 (six percent) were subject to flooding, 7 (two percent) were known peatlands, and 63 (16 percent)

were located within 25 feet of a river, stream, or brook. None of the wetlands were located within the coastal zone to qualify as within 250 feet of a coastal wetland. Therefore, FWSS characteristic A(3) does not apply to freshwater wetlands in the project area. In addition, due to the size of delineated wetlands in comparison to the larger significant wildlife habitat areas, more than one wetland may be located within a single significant wildlife habitat. Overall, there were 45 significant wildlife habitat areas in the vicinity of the proposed project area and 58 wetlands were located within these areas. For specific criteria met by each wetland and distribution of FWSS along the proposed ROW, refer to the Wetland Summary Table in Appendix 11-6. Ninety-three (83 percent) of these FWSS wetlands already occur along existing ROWs corridors. Furthermore, these resources are not associated with or in close proximity to the Orrington Substation.

11.D.10 Wetland Impacts and Impact Avoidance and Minimization

The assessment conducted for the proposed route shows that approximately 175.86 acres of forested wetland will be permanently converted to an early successional cover type (as indicated in Table 7-1). Permanent cover type conversion will occur to forested wetland areas but there will be no permanent fill of forested wetlands. The conversion of forested wetland cover types will result from initial clearing for construction and follow-up vegetation maintenance practices during project operation.

Although 43.56 acres of emergent wetland and 117.03 acres of scrub-shrub wetland are located within the proposed ROW, only minimal temporary impacts will occur to these wetlands. All affected emergent or scrub-shrub wetland areas along the ROW will be maintained in an emergent or scrub-shrub wetland state from ongoing vegetation maintenance during operation. There will be essentially no impact to the very small amount of unconsolidated bottom wetlands present (1.66 acres) because they are primarily open water and the limited amount of vegetation present will be unaffected by clearing or ROW maintenance.

Temporary impacts during construction will be minimized by conducting winter clearing and construction to the maximum extent practicable, use of construction mats when working in or

crossing wetlands that are not frozen and prompt restoration of disturbed areas following construction. Removal of stumps will typically not be required in wetlands unless necessary to install a structure. The stumps that are left in place may promote natural regeneration within the construction ROW depending on the species. Restoration of wetland areas (and therefore the temporary nature of impacts) will be expedited by minimizing the duration of work required for structure installation within wetland areas. Because the hydrology of the wetlands along the route will not be altered (i.e., no inflow/outflow restrictions), no permanent impact to principal functions such as groundwater discharge or sediment stabilization are expected. Impacts to the wildlife habitat value of wetlands are anticipated during the construction period, but will be similarly short-term.

Additional details regarding the minimization of wetland impacts during construction are provided in Section 14, Erosion and Sedimentation Control, of this application and most specifically in the NRI E&S Plan, provided in Appendix 14-1. The NRI E&S Plan provides detailed descriptions of the erosion control measures that will be incorporated into the construction and restoration phases of the project to minimize adverse environmental impacts. Construction practices that will be utilized by BHE to minimize impacts to wetlands will include the following protective measures:

- Erosion and sedimentation control barriers will be installed across the ROW on any slopes leading into wetlands and along the edge of the construction area, as necessary, to prevent disturbed soils from flowing into wetlands that are on or adjacent to the ROW.
- Construction equipment operating within wetlands will be limited primarily to that needed to clear the area, drill the hole necessary for pole structures, set the pole structures, and restore the impacted area.
- Construction activities within wetlands with saturated soils or standing water will be limited to wintertime, frozen soil conditions, as much as practicable, to minimize disturbance and compaction. If the ground is not frozen, either wide-tracked or balloon-tired equipment will be used. If significant rutting occurs, equipment will operate from construction mats.

Herbicide use will be prohibited within 25 feet of all wetlands with standing water (See Appendix 10-1, the NRI Post-Construction Right-of-Way Vegetation Maintenance Plan).

11.D.11 Compensation

No permanent loss of wetland acreage will occur as a result of the proposed NRI. No wetland compensation is proposed or required.

11.D.12 References for Wetlands Investigation Report

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U.S. Army Corps of Engineers (Corp). 1999. *The Highway Methodology Workbook Supplement: Wetland Functions and Values - A Descriptive Approach*. New England District. NAEEP-360-1-30a. September. 32 pp.

APPENDIX 11-1

SOIL AND GEOTECHNICAL SURVEYS

APPENDIX 11-2

SOIL SURVEY MAPS

APPENDIX 11-3

SUMMARY OF SOIL CHARACTERISTICS

APPENDIX 11-3
NORTHEAST RELIABILITY INTERCONNECT
SUMMARY OF SOIL CHARACTERISTICS

Map Unit Symbol	From (mile post)	To (mile post)	Distance (feet)	Map Unit Name	Range of Slope (%)	Frequency of Stones	Drainage	Soil Type (parent material)	Depth to Bedrock (inches)	High Water Table Depth (feet)	K factor (erosion factor)	Erosion Hazard Potential	Hydric Soil (Y or N)
BuA	0.00	0.03	182	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
SeB	0.03	0.14	549	Stetson	2-8	N/A	well drained	glaciofluvial deposits	>60	>6.0	.5-.17	slight	N
BnC	0.14	0.22	446	Bangor	8-15	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
ScB	0.22	0.55	1730	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BnC	0.55	0.73	930	Bangor	8-15	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
HvC	0.73	0.83	569	Howland	8-15	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.17-.24	slight	N
DyB	0.83	0.95	591	Dixmont	2-8	very stony	moderately well drained	glacial till	>60	1.0-2.0	0.28	slight	N
BoA	0.95	1.59	3417	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BuB	1.59	1.76	866	Buxton	2-8	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
ScB	1.76	1.93	908	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BuC	1.93	1.97	217	Buxton	8-15	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight-moderate	N
BuB	1.97	2.07	502	Buxton	2-8	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
BuC	2.07	2.10	194	Buxton	8-15	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight-moderate	N

Map Unit Symbol	From (mile post)	To (mile post)	Distance (feet)	Map Unit Name	Range of Slope (%)	Frequency of Stones	Drainage	Soil Type (parent material)	Depth to Bedrock (inches)	High Water Table Depth (feet)	K factor (erosion factor)	Erosion Hazard Potential	Hydric Soil (Y or N)
BuB	2.10	2.13	169	Buxton	2-8	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
SuB	2.13	2.68	2884	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
ScB	2.68	2.73	274	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BoA	2.73	2.84	578	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
PgB	2.84	2.92	432	Plaisted	2-8	stony	well drained	glacial till	>60	1.5-2.5	.24-.28	slight	N
SuB	2.92	2.96	211	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BoA	2.96	3.07	584	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BuA	3.07	3.12	248	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
SuB	3.12	3.31	1001	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BuB	3.31	3.39	399	Buxton	2-8	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
BoA	3.39	3.50	618	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
HvB	3.50	3.72	1172	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
BxB	3.72	3.78	295	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
PrC	3.78	4.12	1787	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N

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BxB	4.12	4.15	180	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
BuB	4.15	4.28	688	Buxton	2-8	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
BuA	4.28	4.30	106	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
BxB	4.30	4.32	89	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
BuA	4.32	4.39	357	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
BuB	4.39	4.51	640	Buxton	2-8	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
SuB	4.51	4.54	177	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BoA	4.54	4.62	383	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
SuB	4.62	4.64	132	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BuA	4.64	4.69	281	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
SuB	4.69	4.73	216	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BuA	4.73	4.96	1168	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N

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ScB	4.96	5.10	752	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BxB	5.10	5.14	212	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
BnC	5.14	5.22	432	Bangor	8-15	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
BnD	5.22	5.25	164	Bangor	15-25	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
PgC	5.25	5.31	304	Plaisted	8-15	stony	well drained	glacial till	>60	1.5-2.5	.24-.28	slight-moderate	N
BnD	5.31	5.39	421	Bangor	15-25	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
BxB	5.39	5.42	144	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
SvC	5.42	5.50	424	suffield	8-15	fine sandy loam	well drained	glaciomarine and glaciolacustrine deposits	>60	>6.0	.32-.49	moderate-severe	N
BuA	5.50	5.52	140	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
SuB	5.52	5.58	316	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BoA	5.58	5.66	422	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BnD	5.66	5.73	369	Bangor	15-25	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
BoA	5.73	5.79	286	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BnD	5.79	5.84	307	Bangor	15-25	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
BxB	5.84	5.97	678	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
DyC	5.97	5.99	103	Dixmont	8-15	very stony	moderately well drained	glacial till	>60	1.0-2.0	0.28	slight	N
PrE	5.99	6.05	280	Plaisted	15-45	stony	well drained	glacial till	>60	1.5-2.5	.17-.24	moderate-severe	N

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BxB	6.05	6.25	1085	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
BuA	6.25	6.40	802	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
BxB	6.40	6.50	530	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
ScB	6.50	6.82	1699	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BuA	6.82	6.85	146	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
ScB	6.85	6.90	238	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
MsC	6.90	7.02	644	Monarda & Burnham	0-15	extremely stony	very poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
BxB	7.02	7.05	143	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
TkB	7.05	7.21	857	Thorndike	2-8	rock outcrops	well drained	thin glacial till over bedrock	0-20	none above bedrock	.17-.28	slight to moderate	N
BnB	7.21	7.27	329	Bangor	0-8	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
PrE	7.27	7.39	606	Plaisted	15-45	stony	well drained	glacial till	>60	1.5-2.5	.17-.24	moderate-severe	N
MrB	7.39	7.42	190	Monarda & Burnham	0-8	stony/bouldery	poor	dense glacial till	>60	0-1.5	.17-.28	slight	Y
BaC	7.42	7.46	204	Bangor	8-15	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
BaB	7.46	7.51	268	Bangor	2-8	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
BnB	7.51	7.64	668	Bangor	0-8	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
MrB	7.64	7.87	1209	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y

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BxB	7.87	8.20	1733	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
BoA	8.20	8.41	1127	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BxB	8.41	8.46	259	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
PrC	8.46	8.52	315	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
BoA	8.52	8.67	797	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BxB	8.67	9.06	2059	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
BoA	9.06	9.19	701	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BuA	9.19	9.30	554	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
BoA	9.30	9.44	786	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BuA	9.44	9.50	291	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
ScB	9.50	9.63	702	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BuB	9.63	9.72	446	Buxton	2-8	scattered pebbles	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
Sa	9.72	9.77	283	Saco (Medomak)	Nearly level	N/A	very poorly drained	silty alluvial deposits	>60	0.1-0.5	.28-.49	moderate-severe	Y
stream	9.77	9.79	92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Sa	9.79	9.80	85	Saco (Medomak)	Nearly level	N/A	very poorly drained	silty alluvial deposits	>60	0.1-0.5	.28-.49	moderate-severe	Y
SuC2	9.80	9.86	312	Suffield eroded	8-15	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	moderate-severe	N
SuB	9.86	9.98	603	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BuA	9.98	10.04	313	Buxton	0-2	N/A	moderately well drained	glaciolacustrine and glaciomarine sediments	>60	1.5-3.0	.32-.49	slight	N
SuB	10.04	10.10	310	Suffield	2-8	sandy surface soil	well drained	glaciomarine and glaciolacustrine deposits	>60	1.5-3.0	.32-.49	slight	N
BoA	10.10	10.15	269	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
ScB	10.15	10.31	881	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BoA	10.31	10.59	1446	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BxB	10.59	10.69	566	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
BoA	10.69	10.81	616	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BxB	10.81	11.01	1060	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
MsC	11.01	11.06	239	Monarda & Burnham	0-15	extremely stony	very poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
BoA	11.06	11.08	101	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y

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BxB	11.08	11.17	496	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
ScB	11.17	11.32	783	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
BoA	11.32	11.47	788	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
Mu	11.47	11.63	871	muck	N/A	N/A	very poorly drained	decomposed organic materials	N/A	N/A	N/A	N/A	Y
BoA	11.63	11.73	532	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BxB	11.73	11.75	65	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
MsC	11.75	11.79	222	Monarda & Burnham	0-15	extremely stony	very poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
RmD	11.79	11.86	354	Rockland & Thorndike	Strongly sloping	stony/cobbly	somewhat excessively drained	thin glacial till over bedrock	0-12	N/A	.17-.28	slight to moderate	N
RmC	11.86	11.95	513	Rockland & Thorndike	sloping	extremely rocky	well drained	thin glacial till over bedrock	0-12	N/A	.17-.28	slight to moderate	N
RmD	11.95	12.01	321	Rockland & Thorndike	Strongly sloping	stony/cobbly	somewhat excessively drained	thin glacial till over bedrock	0-12	N/A	.17-.28	slight to moderate	N
stream	12.01	12.03	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lk	12.03	12.06	200	Limerick (Charles)	Nearly level	occasional rock outcrops	poorly drained	silty and sandy stream deposits, loamy alluvium	>60	0-1.5	.20-.49	moderate-severe	Y
RmC	12.06	12.10	214	Rockland & Thorndike	sloping	extremely rocky	well drained	thin glacial till over bedrock	0-12	N/A	.17-.28	slight to moderate	N
RmD	12.10	12.17	352	Rockland & Thorndike	Strongly sloping	stony/cobbly	somewhat excessively drained	thin glacial till over bedrock	0-12	N/A	.17-.28	slight to moderate	N
MsC	12.17	12.26	491	Monarda & Burnham	0-15	extremely stony	very poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
TvB	12.26	12.32	305	Thorndike	2-8	very stony	well drained	thin glacial till over bedrock	10-20	none above bedrock	.17-.28	slight to moderate	N

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MsC	12.32	12.39	382	Monarda & Burnham	0-15	extremely stony	very poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
MrB	12.39	12.49	480	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
ScB	12.49	12.57	461	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
HvB	12.57	12.65	383	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
MrB	12.65	12.84	1040	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
PrC	12.84	12.90	323	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
HvB	12.90	12.96	315	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
MrB	12.96	13.06	502	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
PrC	13.06	13.17	598	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
BoA	13.17	13.34	906	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
PrC	13.34	13.44	538	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
HvB	13.44	13.60	805	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
MrB	13.60	13.76	874	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
BxB	13.76	13.97	1110	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
PrC	13.97	14.11	714	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
BxB	14.11	14.19	426	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
MrB	14.19	14.48	1550	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
ScB	14.48	14.68	1040	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
HvB	14.68	14.90	1187	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N

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BxB	14.90	15.03	637	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
HvB	15.03	15.16	720	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
ScB	15.16	15.29	696	Scantic	0-8	N/A	poorly drained	glaciomarine and glaciolacustrine deposits	>60	surface	.32-.49	slight	Y
TvB	15.29	15.38	441	Thorndike	2-8	very stony	well drained	thin glacial till over bedrock	10-20	none above bedrock	.17-.28	slight to moderate	N
stream	15.38	15.41	157	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sa	15.41	15.47	346	Saco (Medomak)	Nearly level	N/A	very poorly drained	silty alluvial deposits	>60	0.1-0.5	.28-.49	moderate-severe	Y
BxB	15.47	15.87	2095	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
HvB	15.87	15.96	485	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
MrB	15.96	16.13	882	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
PrC	16.13	16.23	517	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
MrB	16.23	16.34	597	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
PrC	16.34	16.74	2144	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
HvB	16.74	16.91	850	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
BxB	16.91	16.98	414	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
RaB	16.98	17.15	868	Red Hook & Atherton	0-8	scattered bedrock outcrops	poorly drained	glaciofluvial deposits	>60	0.5-1.5	.17-.32	slight	Y
MaB	17.15	17.33	957	Machias	0-8	gravelly/cobbly	moderately well drained	gravelly sola over glaciofluvial deposits	>60	1.5-2.5	.10-.17	slight	N
MrB	17.33	17.44	586	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
BoA	17.44	17.53	467	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y

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Pa	17.53	17.63	520	Peat & Muck	N/A	peat & muck	very poorly drained organic soil	decomposed organic materials	N/A	N/A	N/A	N/A	Y
BoA	17.63	17.68	293	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
RaB	17.68	18.01	1727	Red Hook & Atherton	0-8	scattered bedrock outcrops	poorly drained	glaciofluvial deposits	>60	0.5-1.5	.17-.32	slight	Y
MaB	18.01	18.25	1279	Machias	0-8	gravelly/cobbly	moderately well drained	gravelly sola over glaciofluvial deposits	>60	1.5-2.5	.10-.17	slight	N
CnB	18.25	18.39	729	Colton	2-8	gravelly/cobbly	excessive	glaciofluvial sdeposits	>60	>6.0	.17-.20	slight	N
CnC	18.39	18.44	259	Colton	8-15	bouldery/ occasional outcrops	excessive	glaciofluvial sdeposits	>60	>6.0	.17-.20	slight	N
HvC	18.44	18.56	650	Howland	8-15	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.17-.24	slight	N
SfC	18.56	18.83	1400	Stetson & Suffield	0-15	gravelly	well drained	glaciofluvial deposits	>60	>6.0	.05-.49	moderate	N
MaB	18.83	19.00	907	Machias	0-8	gravelly/cobbly	moderately well drained	gravelly sola over glaciofluvial deposits	>60	1.5-2.5	.10-.17	slight	N
SfC	19.00	19.14	757	Stetson & Suffield	0-15	gravelly	well drained	glaciofluvial deposits	>60	>6.0	.05-.49	moderate	N
BnB	19.14	19.31	876	Bangor	0-8	very stony	well drained	firm glacial till	>60	>6.0	.20-.28	slight	N
RmC	19.31	19.36	270	Rockland & Thorndike	sloping	extremely rocky	well drained	thin glacial till over bedrock	0-12	N/A	.17-.28	slight to moderate	N
MsC	19.36	19.38	132	Monarda & Burnham	0-15	extremely stony	very poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
BxB	19.38	19.47	466	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
MrB	19.47	19.58	546	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
HvB	19.58	19.62	249	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N

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BxB	19.62	19.69	332	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
HvB	19.69	19.78	487	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
MrB	19.78	19.83	257	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
TvC	19.83	19.86	197	Thorndike	8-15	many rock outcrops	well drained	thin glacial till over bedrock	10-20	>6.0	.17-.20	slight to moderate	N
MrB	19.86	19.92	273	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
PrC	19.92	20.09	938	Plaisted	5-15	stony	well drained	glacial till	>60	1.5-2.5	.20-.24	slight	N
BxB	20.09	20.14	232	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
Sa	20.14	20.18	212	Saco (Medomak)	Nearly level	N/A	very poorly drained	silty alluvial deposits	>60	0.1-0.5	.28-.49	moderate-severe	Y
BxB	20.18	20.32	769	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
MaB	20.32	20.35	160	Machias	0-8	gravelly/cobbly	moderately well drained	gravelly sola over glaciofluvial deposits	>60	1.5-2.5	.10-.17	slight	N
BxB	20.35	20.67	1691	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
MrB	20.67	20.83	847	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
HvB	20.83	21.04	1093	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
TvB	21.04	21.12	424	Thorndike	2-8	very stony	well drained	thin glacial till over bedrock	10-20	none above bedrock	.17-.28	slight to moderate	N
MrB	21.12	21.27	775	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
HvB	21.27	21.38	568	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
TvB	21.38	21.45	388	Thorndike	2-8	very stony	well drained	thin glacial till over bedrock	10-20	none above bedrock	.17-.28	slight to moderate	N
HvB	21.45	21.50	240	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N

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MrB	21.50	21.58	434	Monarda & Burnham	0-8	stony/bouldery	poorly drained	dense glacial till	>60	0-1.5	.17-.28	slight	Y
BoA	21.58	21.90	1695	Biddeford	0-3	N/A	very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-0.5	.32-.49	slight	Y
BxB	21.90	21.94	223	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
TvB	21.94	22.01	380	Thorndike	2-8	very stony	well drained	thin glacial till over bedrock	10-20	none above bedrock	.17-.28	slight to moderate	N
BxB	22.01	22.04	141	Buxton, Scantic, & Biddeford	0-8	stony/bouldery	moderately well drained to somewhat poorly drained	glaciolacustrine and glaciomarine sediments	>60	1.0-3.0	.32-.49	slight	Y
HvB	22.04	22.09	269	Howland	0-8	stony/bouldery	moderately well drained	glacial till	>60	1.0-2.0	.20-.24	slight	N
NO DATA	22.09	74.39											
340B	74.39	74.50	562	Telos-Elliottsville-Monarda complex	0-8	very stony	well drained to poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
348B	74.50	74.57	379	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
340B	74.57	74.60	159	Telos-Elliottsville-Monarda complex	0-8	very stony	well drained to poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
345B	74.60	74.66	317	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
391A	74.66	74.74	407	not described	not described	not described	not described	not described	not described	not described	not described	not described	not described
345B	74.74	74.78	238	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
340C	74.78	74.99	1093	Chesuncook-Elliottsville-Telos complex	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y

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348B	74.99	75.04	278	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
340C	75.04	75.53	2577	Chesuncook-Elliottsville-Telos complex	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
341C	75.53	75.62	476	Elliotsville-Monson	3-15	very stony	moderately well to somewhat excessively drained	glacial till	10-40	>6'	.24-.32	slight	N
340C	75.62	75.71	477	Chesuncook-Elliottsville-Telos complex	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
341C	75.71	75.79	400	Elliotsville-Monson	3-15	very stony	moderately well to somewhat excessively drained	glacial till	10-40	>6'	.24-.32	slight	N
340C	75.79	76.29	2674	Chesuncook-Elliottsville-Telos complex	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
348B	76.29	76.46	879	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
340B	76.46	76.78	1683	Telos-Elliottsville-Monarda complex	0-8	very stony	well drained to poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
348B	76.78	76.87	505	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345C	76.87	76.96	435	Chesuncook-Telos association	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	76.96	77.06	533	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	77.06	77.20	747	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
340B	77.20	77.34	763	Telos-Elliottsville-Monarda complex	0-8	very stony	well drained to poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y

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345B	77.34	77.43	431	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
340C	77.43	77.46	208	Chesuncook-Elliottsville-Telos complex	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
340B	77.46	77.59	644	Telos-Elliottsville-Monarda complex	0-8	very stony	well drained to poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
348B	77.59	77.67	443	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
340C	77.67	77.76	464	Chesuncook-Elliottsville-Telos complex	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
348B	77.76	77.83	392	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
340C	77.83	77.91	402	Chesuncook-Elliottsville-Telos complex	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
348B	77.91	78.21	1606	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	78.21	78.53	1661	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	78.53	78.83	1594	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	78.83	78.97	736	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	78.97	79.00	161	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	79.00	79.07	355	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	79.07	79.27	1098	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y

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340B	79.27	79.39	614	Telos-Elliottsville-Monarda complex	0-8	very stony	well drained to poorly drained	firm glacial till	20-40	0-1.5	.15-.32	slight to moderate	Y
348B	79.39	79.93	2857	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	79.93	80.08	785	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	80.08	80.21	703	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	80.21	80.31	485	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	80.31	80.41	565	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	80.41	80.50	438	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	80.50	80.61	623	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	80.61	80.79	922	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	80.79	80.84	300	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
39P	80.84	81.04	1015	Bucksport and Wonsqueak	0-2	N/A	very poorly drained	decomposed organic materials	>60	+1.0-0.5	0.49	slight	Y
343B	81.04	81.18	749	not described	0-8	not described	not described	not described	not described	not described	not described	not described	not described
344C	81.18	81.47	1539	Danforth-Elliottsville complex	3-15	very stony	well drained	glacial till	20-40	>6	.15-.28	slight to moderate	N
343B	81.47	81.68	1087	not described	0-8	not described	not described	not described	not described	not described	not described	not described	not described

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380C	81.68	81.82	777	Masardis-Sheepscot complex	0-15	gravelly fine sandy loam	moderately well to somewhat excessively drained	glaciofluvial sands and gravels	>60	1.5-3.0	.10-.17	slight	N
Gravel Pit	81.82	81.89	354	Gravel Pit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
316C	81.89	81.99	547	not described	not described	not described	not described	not described	not described	not described	not described	not described	not described
39M	81.99	82.20	1064	Wonsqueak and Bucksport: frequently flooded	0-2	N/A	very poorly drained	decomposed organic materials	>60	+1.0-0.5	0.49	slight	Y
348B	82.20	82.23	180	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	82.23	82.30	394	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	82.30	82.36	290	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	82.36	82.48	621	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	82.48	82.54	326	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345B	82.54	82.84	1580	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
345C	82.84	82.91	365	Chesuncook-Telos association	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
348B	82.91	82.95	249	Monarda-Telos association	0-8	very stony	somewhat poorly to poorly drained	dense glacial till	>60	0-1.5	.15-.32	slight	Y
345C	82.95	83.01	284	Chesuncook-Telos association	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
345B	83.01	83.15	774	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N

Map Unit Symbol	From (mile post)	To (mile post)	Distance (feet)	Map Unit Name	Range of Slope (%)	Frequency of Stones	Drainage	Soil Type (parent material)	Depth to Bedrock (inches)	High Water Table Depth (feet)	K factor (erosion factor)	Erosion Hazard Potential	Hydric Soil (Y or N)
345C	83.15	83.30	777	Chesuncook-Telos association	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
345B	83.30	83.38	400	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
39M	83.38	83.44	305	Wonsqueak and Bucksport: frequently flooded	0-2	N/A	very poorly drained	decomposed organic materials	>60	+1.0-0.5	0.49	slight	Y
332B	83.44	83.53	498	Lamoine-Buxton-Scantic complex	0-15	N/A	moderately to poorly drained	glaciomarine deposits	>60	+1.0-3.0	.32-.49	slight	Y
345C	83.53	83.68	821	Chesuncook-Telos association	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
332B	83.68	83.71	108	Lamoine-Buxton-Scantic complex	0-15	N/A	moderately to poorly drained	glaciomarine deposits	>60	+1.0-3.0	.32-.49	slight	Y
333A	83.71	83.73	140	Scantic-Biddeford association	0-3	N/A	poorly to very poorly drained	glaciolacustrine and glaciomarine sediments	>60	+1.0-1.0	.32-.49	slight	Y
332B	83.73	83.87	735	Lamoine-Buxton-Scantic complex	0-15	N/A	moderately to poorly drained	glaciomarine deposits	>60	+1.0-3.0	.32-.49	slight	Y
345C	83.87	84.06	1000	Chesuncook-Telos association	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
345B	84.06	84.16	502	Telos-Chesuncook association	0-8	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N
345C	84.16	84.25	498	Chesuncook-Telos association	3-15	very stony	moderately well to somewhat poorly drained	firm glacial till	>60	.5-2.5	.24-.32	slight	N

APPENDIX 11-4

CUMULATIVE SUMMARY OF SOILS ALONG ROUTE

APPENDIX 11-4
NORTHEAST RELIABILITY INTERCONNECT
CUMMULATIVE SUMMARY OF SOILS ALONG ROUTE

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
BaB	Bangor	2-8	N	Slight	>60	7.46	7.51	268	
								268	***0.16%***
BaC	Bangor	8-15	N	Slight	>60	7.42	7.46	204	
								204	***0.12%***
BnB	Bangor	0-8	N	Slight	>60	7.21	7.27	329	
						7.51	7.64	668	
						19.14	19.31	876	
								1874	***1.11%***
BnC	Bangor	8-15	N	Slight	>60	0.14	0.22	446	
						0.55	0.73	930	
						5.14	5.22	432	
								1807	***1.07%***
BnD	Bangor	15-25	N	Slight	>60	5.22	5.25	164	
						5.31	5.39	421	
						5.66	5.73	369	
						5.79	5.84	307	
								1261	***0.75%***
BoA	Biddeford	0-3	Y	Slight	>60	0.95	1.59	3417	
						2.73	2.84	578	
						2.96	3.07	584	
						3.39	3.50	618	
						4.54	4.62	383	
						5.58	5.66	422	
						5.73	5.79	286	
						8.20	8.41	1127	
						8.52	8.67	797	
						9.06	9.19	701	
						9.30	9.44	786	
						10.10	10.15	269	
						10.31	10.59	1446	
						10.69	10.81	616	
						11.06	11.08	101	
						11.32	11.47	788	
						11.63	11.73	532	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
						13.17	13.34	906	
(BoA continued…)						17.44	17.53	467	
						17.63	17.68	293	
						21.58	21.90	1695	
								16810	***9.97%***
BuA	Buxton	0-2	N	Slight	>60	0.00	0.03	182	
						3.07	3.12	248	
						4.28	4.30	106	
						4.32	4.39	357	
						4.64	4.69	281	
						4.73	4.96	1168	
						5.50	5.52	140	
						6.25	6.40	802	
						6.82	6.85	146	
						9.19	9.30	554	
						9.44	9.50	291	
						9.98	10.04	313	
								4588	***2.72%***
BuB	Buxton	2-8	N	Slight	>60	1.59	1.76	866	
						1.97	2.07	502	
						2.10	2.13	169	
						3.31	3.39	399	
						4.15	4.28	688	
						4.39	4.51	640	
						9.63	9.72	446	
								3709	***2.20%***
BuC	Buxton	8-15	N	Slight	>60	1.93	1.97	217	
						2.07	2.10	194	
								410	***0.24%***
BxB	Buxton, Scantic, & Biddeford	0-8	Y		>60	3.72	3.78	295	
				Slight		4.12	4.15	180	
						4.30	4.32	89	
						5.10	5.14	212	
						5.39	5.42	144	
						5.84	5.97	678	
						6.05	6.25	1085	
						6.40	6.50	530	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
(BxB Continued…)						7.02	7.05	143	
						7.87	8.20	1733	
						8.41	8.46	259	
						8.67	9.06	2059	
						10.59	10.69	566	
						10.81	11.01	1060	
						11.08	11.17	496	
						11.73	11.75	65	
						13.76	13.97	1110	
						14.11	14.19	426	
						14.90	15.03	637	
						15.47	15.87	2095	
						16.91	16.98	414	
						19.38	19.47	466	
						19.62	19.69	332	
						20.09	20.14	232	
						20.18	20.32	769	
						20.35	20.67	1691	
						21.90	21.94	223	
						22.01	22.04	141	
								18,129	***10.75%***
CnB	Colton	2-8	N	Slight	>60	18.25	18.39	729	
								729	***0.43%***
CnC	Colton	8-15	N	Slight	>60	18.39	18.44	259	
								259	***0.15%***
DyB	Dixmont	2-8	N	Slight	>60	0.83	0.95	591	
								591	***0.35%***
DyC	Dixmont	8-15	N	Slight	>60	5.97	5.99	103	
								103	***0.06%***
Gravel Pit	Gravel Pit	N/A	N/A	Slight	>60	81.82	81.89	354	
								354	***0.21%***

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
HvB	Howland	0-8	N	Slight	>60	3.50	3.72	1172	
						12.57	12.65	383	
						12.90	12.96	315	
						13.44	13.60	805	
						14.68	14.90	1187	
						15.03	15.16	720	
						15.87	15.96	485	
						16.74	16.91	850	
						19.58	19.62	249	
						19.69	19.78	487	
						20.83	21.04	1093	
						21.27	21.38	568	
						21.45	21.50	240	
						22.04	22.09	269	
								8823	***5.23%***
HvC	Howland	8-15	N	Slight	>60	0.73	0.83	569	
						18.44	18.56	650	
								1219	***0.72%***
Lk	Limerick (Charles)	Nearly level	Y	Moderate to severe	>60	12.03	12.06	200	
								200	***0.12%***
MaB	Howland	8-15	N	Slight		17.15	17.33	957	
						18.01	18.25	1279	
						18.83	19.00	907	
						20.32	20.35	160	
								3302	***1.96%***
MrB	Monarda & Burnham	0-8	Y	Slight	>60	7.39	7.42	190	
						7.64	7.87	1209	
						12.39	12.49	480	
						12.65	12.84	1040	
						12.96	13.06	502	
						13.60	13.76	874	
						14.19	14.48	1550	
						15.96	16.13	882	
						16.23	16.34	597	
						17.33	17.44	586	
						19.47	19.58	546	
		(MrB Continued…)				19.78	19.83	257	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
						19.86	19.92	273	
						20.67	20.83	847	
						21.12	21.27	775	
						21.50	21.58	434	
								11,041	***6.55%***
MsC	Monarda & Burnham	0-15	Y	Slight	>60	6.90	7.02	644	
						11.01	11.06	239	
						11.75	11.79	222	
						12.17	12.26	491	
						12.32	12.39	382	
						19.36	19.38	132	
								2110	***1.25%***
Mu	muck	N/A	Y	N/A	N/A	11.47	11.63	871	
								871	***0.52%***
Pa	Peat & Muck	N/A	Y	N/A	N/A	17.53	17.63	520	
								520	***0.31%***
PgB	Plaisted	2-8	N	Slight	>60	2.84	2.92	432	
								432	***0.26%***
PgC	Plaisted	8-15	N	Slight to moderate	>60	5.25	5.31	304	
								304	***0.18%***
PrC	Plaisted	5-15	N	Slight	>60	3.78	4.12	1787	
						8.46	8.52	315	
						12.84	12.90	323	
						13.06	13.17	598	
						13.34	13.44	538	
						13.97	14.11	714	
						16.13	16.23	517	
						16.34	16.74	2144	
						19.92	20.09	938	
								7874	***4.67%***
PrE	Plaisted	15-45	N	Moderate to severe	>60	5.99	6.05	280	
						7.27	7.39	606	
								885	***0.52%***
RaB	Red Hook & Atherton	0-8	Y	Slight		16.98	17.15	868	
						17.68	18.01	1727	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
								2595	***1.54%***
RmC	Rockland & Thorndike	sloping	N	Slight to moderate	0-12	11.86	11.95	513	
						12.06	12.10	214	
						19.31	19.36	270	
								998	***0.59%***
RmD	Rockland & Thorndike	Strongly sloping	N	Slight to moderate	0-12	11.79	11.86	354	
						11.95	12.01	321	
						12.10	12.17	352	
								1027	***0.61%***
Sa	Saco (Medomak)	Nearly level	Y	Moderate to severe	>60	9.72	9.77	283	
						9.79	9.80	85	
						15.41	15.47	346	
						20.14	20.18	212	
								925	***0.55%***
ScB	Scantic	0-8	Y	Slight	>60	0.22	0.55	1730	
						1.76	1.93	908	
						2.68	2.73	274	
						4.96	5.10	752	
						6.50	6.82	1699	
						6.85	6.90	238	
						9.50	9.63	702	
						10.15	10.31	881	
						11.17	11.32	783	
						12.49	12.57	461	
						14.48	14.68	1040	
						15.16	15.29	696	
								10,165	***6.03%***
SeB	Stetson	2-8	N	Slight	>60	0.03	0.14	549	
								549	***0.33%***
SfC	Stetson & Suffield	0-15	N	Moderate	>60	18.56	18.83	1400	
						19.00	19.14	757	
								2157	***1.28%***
stream	N/A	N/A	N/A	Slight	>60	9.77	9.79	92	
						12.01	12.03	70	
						15.38	15.41	157	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
								319	***0.19%***
SuB	Suffield	2-8	N	Slight	>60	2.13	2.68	2884	
						2.92	2.96	211	
						3.12	3.31	1001	
						4.51	4.54	177	
						4.62	4.64	132	
						4.69	4.73	216	
						5.52	5.58	316	
						9.86	9.98	603	
						10.04	10.10	310	
								5849	***3.47%***
SuC2	Suffield eroded	8-15	N	Moderate to severe	>60	9.80	9.86	312	
								312	***0.18%***
SvC	suffield	8-15	N	Moderate to severe	>60	5.42	5.50	424	
								424	***0.25%***
TkB	Thorndike	2-8	N	Slight to moderate	0-20	7.05	7.21	857	
								857	***0.51%***
TvB	Thorndike	2-8	N	Slight to moderate	10-20	12.26	12.32	305	
						15.29	15.38	441	
						21.04	21.12	424	
						21.38	21.45	388	
						21.94	22.01	380	
								1939	***1.15%***
TvC	Thorndike	8-15	N	Slight to moderate	10-20	19.83	19.86	197	
								197	***0.12%***
316C	not described	not described	not described	Slight	>60	81.89	81.99	547	
								547	***0.32%***
332B	Lamoine-Buxton-Scantic complex	0-15	Y	Slight	>60	83.44	83.53	498	
						83.68	83.71	108	
						83.73	83.87	735	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
								1341	***0.80%***
333A	Scantic-biddeford association	0-3	Y	Slight	>60	83.71	83.73	140	
								140	***0.08%***
340B	Telos-Elliottsville-Monarda complex	0-8	Y	Slight to moderate	20-40	74.39	74.50	562	
						74.57	74.60	159	
						76.46	76.78	1683	
						77.20	77.34	763	
						77.46	77.59	644	
						79.27	79.39	614	
								4425	***2.62%***
340C	Chesuncook-Elliottsville-Telos complex	3-15	Y	Slight to moderate	20-40	74.78	74.99	1093	
						75.04	75.53	2577	
						75.62	75.71	477	
						75.79	76.29	2674	
						77.43	77.46	208	
						77.67	77.76	464	
						77.83	77.91	402	
								7896	***4.68%***
341C	Elliotsville-Monson	3-15	N	Slight	10-40	75.53	75.62	476	
						75.71	75.79	400	
								876	***0.52%***
343B	Not described	0-8	Not described	Not described	Not described	81.04	81.18	749	
						81.47	81.68	1087	
								1836	***1.09%***
344C	Danforth-Elliottsville complex	3-15	N	Slight to moderate	20-40	81.18	81.47	1539	
								1539	***0.91%***
345B	Telos-Chesuncook association	0-8	N	Slight	>60	74.60	74.66	317	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
						74.74	74.78	238	
						77.06	77.20	747	
						77.34	77.43	431	
						78.21	78.53	1661	
						78.83	78.97	736	
						79.00	79.07	355	
						79.93	80.08	785	
						80.21	80.31	485	
						80.41	80.50	438	
						80.61	80.79	922	
						82.23	82.30	394	
						82.36	82.48	621	
						82.54	82.84	1580	
						83.01	83.15	774	
						83.30	83.38	400	
						84.06	84.16	502	
								11,386	***6.75%***
345C	Chesuncook-Telos association	3-15	N	Slight	>60	76.87	76.96	435	
						82.84	82.91	365	
						82.95	83.01	284	
						83.15	83.30	777	
						83.53	83.68	821	
						83.87	84.06	1000	
						84.16	84.25	498	
								4181	***2.48%***
348B	Monarda-Telos association	0-8	Y	Slight	>60	74.50	74.57	379	
						74.99	75.04	278	
						76.29	76.46	879	
						76.78	76.87	505	
						76.96	77.06	533	
						77.59	77.67	443	
						77.76	77.83	392	
						77.91	78.21	1606	
						78.53	78.83	1594	
						78.97	79.00	161	

Map Unit Symbol	Map Unit Name	Range of Slope (%)	Hydric Soil (Y or N)	Erosion Hazard	Depth to Bedrock (inches)	From (mile post)	To (mile post)	Map Unit Traverse Distance (feet)	*Percent of Total Measured Distance*
								Total Distance (feet)	
						79.07	79.27	1098	
						79.39	79.93	2857	
						80.08	80.21	703	
						80.31	80.41	565	
						80.50	80.61	623	
						80.79	80.84	300	
						82.20	82.23	180	
						82.30	82.36	290	
						82.48	82.54	326	
						82.91	82.95	249	
								13,960	***8.28%***
380C	Masardis-Sheepscot complex	0-15	N	Slight	>60	81.68	81.82	777	
								777	***0.46%***
391A	not described	not described	not described	Slight	>60	74.66	74.74	407	
								407	***0.24%***
39M	Wonsqueak and Bucksport: frequently flooded	0-2	Y	Slight	>60	81.99	82.20	1064	
						83.38	83.44	305	
								1369	***0.81%***
39P	Bucksport and Wonsqueak	0-2	Y	Slight	>60	80.84	81.04	1015	
								1015	***0.60%***
Total Measured Distance								***168,687***	***100.00%***

APPENDIX 11-5

REPRESENTATIVE WETLAND FIELD DATA FORMS AND PHOTOGRAPHIC DOCUMENTATION

APPENDIX 11-6

WETLAND SUMMARY TABLE