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Table 2-1
Communities Traversed by the Underground Transmission Cable Construction Zone

Type	City/Town/Village	County	MP Range	Length (miles)
Dresden to Whitehall (Route 22)				
Terrestrial	Dresden	Washington	101.3-109.9	8.6
Terrestrial	Whitehall	Washington	109.9-110.1	0.2
Terrestrial	Whitehall Village	Washington	110.1-112.1	2.0
Whitehall to Cementon (Railroad)				
Terrestrial	Whitehall Village	Washington	112.1-113.1	1.0
Terrestrial	Whitehall	Washington	113.1-117.8	4.7
Terrestrial	Fort Ann	Washington	117.8-123.0	5.8
Terrestrial	Fort Ann Village	Washington	123.0-123.9	0.9
Terrestrial	Hartford	Washington	123.9-124.4	0.5
Terrestrial	Kingsbury	Washington	124.4-132.4	8.0
Terrestrial	Fort Edward	Washington	132.4-133.8	1.4
Terrestrial	Fort Edward Village	Washington	133.8-135.3	1.5
Terrestrial	Moreau	Saratoga	135.3-139.6	4.4
Terrestrial	Northumberland	Saratoga	139.6-143.2	3.6
Terrestrial	Wilton	Saratoga	143.2-150.0	6.9
Terrestrial	Greenfield	Saratoga	150.0-151.9	1.9
Terrestrial	Saratoga Springs	Saratoga	151.9-157.5	5.6
Terrestrial	Milton	Saratoga	157.5-158.9	1.4
Terrestrial	Ballston	Saratoga	158.9-165.9	7.0
Terrestrial	Clifton Park	Saratoga	165.9-168.2	2.3
Terrestrial	Glenville	Schenectady	168.2-171.7	3.5
Terrestrial	Schenectady	Schenectady	171.7-175.8	4.1
Terrestrial	Rotterdam	Schenectady	175.8-180.5	4.7
Terrestrial	Guilderland	Albany	180.5-187.5	6.9
Terrestrial	Voorheesville Village	Albany	187.5-189.2	1.8
Terrestrial	New Scotland	Albany	189.2-193.8	4.6
Terrestrial	Bethlehem	Albany	193.8-199.6	5.9
Terrestrial	Coeymans	Albany	199.6-202.6	3.0
Terrestrial	Ravena Village (Coeymans)	Albany	202.6-203.9	1.2
Terrestrial	New Baltimore	Greene	203.9-210.2	6.0
Terrestrial	Coxsackie Village	Greene	211.1-212.2	1.1
Terrestrial	Coxsackie	Greene	212.2-215.3	4.1
Terrestrial	Athens	Greene	215.3-219.6	4.3
Terrestrial	Catskill	Greene	219.6-221.0 and 222.6-228.4	7.3
Terrestrial	Catskill Village	Greene	221.0-222.6	1.6
Haverstraw Bay Bypass Route				
Terrestrial	Stony Point	Rockland	295.4-297.7	2.3
Terrestrial	Haverstraw	Rockland	297.7-298.0	0.3
Terrestrial	West Haverstraw Village (Haverstraw)	Rockland	298.0-298.6	0.6
Terrestrial	Haverstraw Village (Haverstraw)	Rockland	298.6-301.4	2.8
Terrestrial	Clarkstown	Rockland	301.4-302.8	1.4
Hell Gate Bypass Route				
Terrestrial	New York City (Manhattan)	New York	330.2-330.3	0.04
Terrestrial	New York City (Bronx)	New York	330.3-331.4	1.1
Terrestrial	New York City (Queens)	New York	331.4-331.9	0.5
Luyster Creek Converter Station				
Terrestrial	New York City (Queens)	New York	-	N/A

Table 2.1-1
Communities Traversed by the Underground Transmission Cable Corridor (Reconfigured Segments)

Type	City/Town/Village	County	Length (miles)
Dresden to Whitehall (Route 22)			
Terrestrial	Dresden	Washington	8.4
Terrestrial	Whitehall	Washington	0.2
Terrestrial	Whitehall Village (White Hall)	Washington	1.9
Selkirk to Cementon			
Terrestrial	Bethlehem	Albany	0.5
Terrestrial	Coeymans	Albany	3.3
Terrestrial	Ravena Village (Coeymans)	Albany	1.3
Terrestrial	New Baltimore	Greene	6.0
Terrestrial	Coxsackie	Greene	4.1
Terrestrial	Coxsackie Village (Coxsackie)	Greene	1.1
Terrestrial	Athens	Greene	4.2
Terrestrial	Catskill	Rockland	6.4
Terrestrial	Catskill Village (Catskill)	Rockland	1.5
Haverstraw Bay Bypass Route			
Terrestrial	Stony Point	Rockland	2.2
Terrestrial	Haverstraw	Rockland	0.2
Terrestrial	West Haverstraw Village (Haverstraw)	Rockland	0.6
Terrestrial	Haverstraw Village (Haverstraw)	Rockland	0.6
Terrestrial	Clarkstown	Rockland	0.9
Hell Gate Bypass Route			
Terrestrial	New York City (Manhatten)	New York	0.04
Terrestrial	New York City (Bronx)	New York	1.1
Terrestrial	New York City (Queens)	New York	0.5
Astoria to Rainey Route			
Terrestrial	New York City (Queens)	New York	3.0

Table 2.1-2
Percentage of Land Use Class within the Study Area Along the Underground Transmission Corridor (Reconfigured Segments)

Land Use Class	Percent of Total Land Use
Land Use in Total Study Area*	
Commercial/Industrial/Transportation	22.1%
Residential	10.8%
Forested	33.9%
Agriculture	4.8%
Open Land/Pasture/Hay/Scrub/Shrub	21.5%
Open Water	5.3%
Parks/Open Space/Recreation	1.6%
Total:	*100%*

*Study area includes 600 feet on both sides of transmission route.

Table 2.1-3
Percentage of Land Use Class within the Study Area Along the Underground Transmission Segments (By Community) (Reconfigured Segments)

County	Municipality	C/I/T	R	F	A	OL	OW	P/O/R
Dresden to Whitehall (Route 22)								
Washington	Dresden	7.6%	6.1%	71.2%	5.4%	7.5%	2.1%	0.1%
Washington	Whitehall	5.2%	0.0%	0.0%	0.7%	2.2%	92.0%	0.0%
Washington	Whitehall Village (Whitehall)	15.2%	14.5%	34.7%	22.8%	10.7%	1.9%	0.1%
Selkirk to Cementon								
Albany	Bethlehem	17.7%	20.0%	49.9%	0.0%	12.3%	0.0%	0.0%
Albany	Coeymans	23.3%	11.5%	39.9%	0.0%	24.7%	0.7%	0.0%
Albany	Ravena (Coeymans)	18.7%	49.0%	5.2%	0.0%	19.5%	0.0%	7.6%
Greene	New Baltimore	6.1%	4.4%	42.4%	8.2%	38.3%	0.5%	0.0%
Greene	Coxsackie	16.1%	1.7%	13.0%	10.0%	58.9%	0.2%	0.0%
Greene	Coxsackie Village (Coxsackie)	20.3%	32.2%	10.3%	0.0%	36.7%	0.0%	0.5%
Greene	Athens	11.0%	0.0%	19.0%	5.6%	63.7%	0.7%	0.0%
Greene	Catskill	19.2%	1.4%	12.0%	7.3%	58.9%	1.3%	0.0%
Greene	Catskill Village (Catskill)	50.4%	11.5%	5.7%	0.0%	25.2%	3.6%	3.5%
Haverstraw Bay Bypass Route								
Rockland	Stony Point	25.7%	20.8%	13.8%	0.0%	21.8%	17.9%	0.0%
Rockland	Haverstraw	11.9%	1.1%	11.9%	0.0%	37.4%	37.7%	0.0%
Rockland	West Haverstraw Village (Haverstraw)	37.6%	46.1%	2.8%	0.0%	12.5%	1.0%	0.0%
Rockland	Haverstraw Village (Haverstraw)	33.7%	32.7%	27.0%	0.0%	5.3%	0.3%	0.9%
Rockland	Clarkstown	0.1%	0.0%	49.0%	0.0%	3.1%	47.7%	0.0%
Hell Gate Bypass Route								
New York	New York City (Bronx)	73.6%	0.0%	0.0%	0.0%	13.3%	12.4%	0.7%
New York	New York City (Manhattan)	13.1%	0.0%	0.0%	0.0%	0.2%	51.7%	35.0%
New York	New York City (Queens)	45.4%	0.0%	0.0%	0.0%	0.0%	54.62%	0.0%
Astoria to Rainey Route								
New York	New York City (Queens)	53.9%	36.5%	1.5%	0.0%	0.9%	2.2%	5.0%

Notes:
C/I/T = Commercial/Industrial/Transportation
R = Residential
F = Forest
A = Agriculture
OL = Open Land/Pasture/Hay/Scrub/Shrub
OW = Open Water
P/O/R = Parks/Open Space/Recreation

Table 2.1-4
Agricultural Districts Along the Underground Transmission Cable Corridor (Reconfigured Segments)

County	Municipality	District Code	District	Created	Certified	Area (acres)
Dresden to Whitehall (Route 22)						
No Agricultural Districts within Study Area						
Selkirk to Cementon						
Greene	Coxsackie	GR124	1	6/18/1980	8/2/2004	202.62
	Catskill	GR124	1	6/18/1980	8/2/2004	91.19
	Athens	GR124	1	6/18/1980	8/2/2004	80.56
	New Baltimore	GR124	1	6/18/1980	8/2/2004	1.08
Selkirk to Cementon Total						375.45
Haverstraw Bay Bypass Route						
No Agricultural Districts within Study Area						
Hell Gate Bypass Route						
No Agricultural Districts within Study Area						
Astoria to Rainey Route						
No Agricultural Districts within Study Area						

Table 2-2A
Percentage of Land Use Class within the Study Area Along the Underground Transmission Segments (By Community)

County	Municipality	C/I/T	R	F	A	OL	OW	P/O/R
Dresden to Whitehall (Route 22)								
Washington	Dresden	7.55%	5.99%	70.68%	5.22%	7.51%	2.93%	0.12%
Washington	Whitehall	14.41%	13.33%	31.90%	21.00%	10.05%	9.23%	0.08%
Whitehall to Cementon (Railroad)								
Albany	Bethlehem	47.25%	4.26%	17.47%	0.30%	30.72%	0.00%	0.00%
Albany	Coeymans	21.76%	23.90%	28.50%	0.00%	22.88%	0.44%	2.52%
Albany	Guilderland	17.97%	6.88%	51.25%	3.26%	18.97%	1.67%	0.00%
Albany	New Baltimore	14.64%	0.00%	31.42%	0.00%	53.94%	0.00%	0.00%
Albany	New Scotland	15.60%	22.75%	35.55%	5.63%	19.18%	0.09%	1.20%
Albany	Rotterdam	3.15%	67.03%	23.44%	0.00%	0.00%	6.38%	0.00%
Greene	Athens	10.98%	0.00%	19.01%	5.61%	63.70%	0.70%	0.00%
Greene	Catskill	23.48%	3.03%	11.25%	5.35%	52.59%	3.69%	0.61%
Greene	Coxsackie	17.02%	8.03%	12.40%	7.96%	54.29%	0.20%	0.11%
Greene	New Baltimore	6.12%	4.44%	42.41%	8.23%	38.28%	0.53%	0.00%
Saratoga	Ballston	11.46%	7.87%	70.33%	0.31%	9.98%	0.06%	0.00%
Saratoga	Clifton Park	9.76%	4.99%	70.67%	0.00%	13.68%	0.89%	0.00%
Saratoga	Greenfield	9.74%	13.10%	44.73%	0.00%	28.84%	0.23%	3.36%
Saratoga	Malta	2.45%	42.40%	55.15%	0.00%	0.00%	0.00%	0.00%
Saratoga	Milton	11.90%	19.46%	57.99%	0.00%	3.03%	0.00%	7.61%
Saratoga	Moreau	6.59%	7.10%	35.08%	11.60%	36.03%	3.60%	0.00%
Saratoga	Northumberland	9.90%	13.16%	53.33%	7.55%	15.79%	0.00%	0.27%
Saratoga	Saratoga Springs	17.15%	10.97%	52.92%	0.24%	18.58%	0.14%	0.00%
Saratoga	Wilton	10.71%	16.63%	47.62%	13.85%	9.74%	0.79%	0.65%
Schenectady	Clifton Park	6.68%	0.00%	89.69%	0.00%	3.64%	0.00%	0.00%
Schenectady	Glenville	12.09%	4.44%	56.17%	0.54%	25.51%	1.26%	0.00%
Schenectady	Rotterdam	41.60%	9.56%	35.90%	0.19%	12.15%	0.60%	0.00%
Schenectady	Schenectady	57.76%	6.09%	21.20%	0.00%	8.72%	1.31%	4.92%
Washington	Fort Ann	13.06%	7.90%	51.94%	1.66%	9.23%	14.72%	1.50%
Washington	Fort Edward	39.70%	12.39%	9.79%	24.29%	8.23%	3.01%	2.60%
Washington	Hartford	0.00%	0.00%	25.34%	49.06%	3.43%	17.07%	5.10%
Washington	Kingsbury	7.19%	2.59%	23.27%	17.86%	39.81%	9.28%	0.00%
Washington	Moreau	6.63%	0.00%	1.43%	0.00%	0.00%	91.94%	0.00%
Washington	Whitehall	12.51%	5.53%	32.81%	3.21%	34.56%	11.08%	0.33%
Haverstraw Bay Bypass Route								
Rockland	Stony Point	24.42%	19.78%	13.07%	0.00%	20.53%	22.19%	0.00%
Rockland	Haverstraw	32.90%	33.09%	21.56%	0.00%	8.96%	2.81%	0.68%
Rockland	Clarkstown	16.82%	6.75%	58.64%	0.00%	6.89%	10.90%	0.00%
Hell Gate Bypass Route								
Bronx	Bronx	77.07%	0.00%	0.00%	0.00%	11.41%	10.78%	0.73%
Bronx	Manhattan	31.61%	0.00%	0.00%	0.00%	39.71%	28.68%	0.00%
Bronx	Queens	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
New York	Bronx	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
New York	Manhattan	13.23%	0.00%	0.00%	0.00%	0.19%	51.14%	35.44%
New York	Queens	0.88%	0.00%	0.00%	0.00%	0.00%	99.12%	0.00%
Queens	Manhattan	95.85%	0.00%	0.00%	0.00%	0.00%	4.15%	0.00%
Queens	Queens	33.70%	0.00%	0.00%	0.00%	0.00%	66.30%	0.00%
Luyster Creek Converter Station								
Queens	Queens	67.61%	8.15%	2.11%	0.00%	0.80%	18.02%	3.31%

Notes:
C/I/T = Commercial/Industrial/Transportation
R = Residential
F = Forest
A = Agriculture
OL = Open Land/Pasture/Hay/Scrub/Shrub
OW = Open Water
P/O/R = Parks/Open Space/Recreation

Table 2-2B
Total Percentage of Land Use Class within the Study Area Along the Underground Transmission Cable Construction Zone and Aboveground Facilities

Land Use Class	Percent of Total Land Use
Land Use in Total Study Area*	
Commercial/Industrial/Transportation	21.1%
Residential	10.2%
Forest	35.1%
Agriculture	5.0%
Open Land/Pasture/Hay/Scrub/Shrub	22.2%
Open Water	5.3%
Parks/Open Space/Recreation	1.1%
Total:	*100%*

*Study area includes 600 feet on both sides of transmission route and 0.5 mile radius surrounding the aboveground facilities.

Table 2-3
Agricultural Districts within 200 feet of the Underground Transmission Cable Construction Zone

County	District Code	District	Created	Certified	Length (feet)	Length (miles)
Dresden to Whitehall (Route 22)						
No Agricultural Districts within Study Area						
Whitehall to Cementon (Railroad)						
Washington	WASH001	1	3/1/1976	9/11/2001	16745	3.17
	WASH007	7	5/26/1974	8/14/2007	1991	0.38
	WASH007	7	5/26/1974	8/14/2007	20541	3.89
	WASH006	6	3/16/1981	8/14/2007	7411	1.40
Saratoga	SARA001	1	2/17/1973	8/5/2005	38811	7.35
	SARA002	2	11/17/1974	3/8/1999	7279	1.38
	SARA002	2	11/17/1974	3/8/1999	1553	0.29
Schenectady	SCHE001	1	2/28/1988	3/16/2005	407	0.08
	SCHE001	1	2/28/1988	3/16/2005	250	0.05
Albany	ALBA003	3	2/22/1977	7/23/2003	5	0.00
	ALBA003	3	2/22/1977	7/23/2003	1801	0.34
	ALBA003	3	2/22/1977	7/23/2003	874	0.17
	ALBA003	3	2/22/1977	7/23/2003	420	0.08
	ALBA003	3	2/22/1977	7/23/2003	1733	0.33
	ALBA003	3	2/22/1977	7/23/2003	1722	0.33
	ALBA003	3	2/22/1977	7/23/2003	3639	0.69
	ALBA003	3	2/22/1977	7/23/2003	2651	0.50
	ALBA003	3	2/22/1977	7/23/2003	2000	0.38
	ALBA003	3	2/22/1977	7/23/2003	642	0.12
	ALBA003	3	2/22/1977	7/23/2003	1229	0.23
	ALBA003	3	2/22/1977	7/23/2003	3400	0.64
	ALBA003	3	2/22/1977	7/23/2003	443	0.08
Greene	GR124	1	6/18/1980	8/2/2004	1983	0.38
	GR124	1	6/18/1980	8/2/2004	2433	0.46
	GR124	1	6/18/1980	8/2/2004	3130	0.59
	GR124	1	6/18/1980	8/2/2004	445	0.08
	GR124	1	6/18/1980	8/2/2004	970	0.18
	GR124	1	6/18/1980	8/2/2004	2877	0.54
	GR124	1	6/18/1980	8/2/2004	7742	1.47
	GR124	1	6/18/1980	8/2/2004	2913	0.55
				Whitehall to Cementon (Railroad) Subtotal:	138,040	26.19
Haverstraw Bay Bypass Route						
No Agricultural Districts within Study Area						
Hell Gate Bypass Route						
No Agricultural Districts within Study Area						
Luyster Creek Converter Station						
No Agricultural Districts within Study Area						

Table 2.3-1 Parks/Public Lands within 600 feet of the Underground Transmission Cable Corridor (Reconfigured Segments)		
Park/Public Land	Community	Approximate Distance from Centerline (feet)
STATE PARKS/PUBLIC LAND		
Dresden to Whitehall (Route 22)		
Adirondack Park	Dresden	0
Selkirk to Cementon		
No State-Maintained Parks/Public Land Areas within Study Area		
Haverstraw Bay Bypass Route		
Haverstraw Beach State Park	Haverstraw	0
Hook Mountain State Park	Clarkstown	0
Hell Gate Bypass Route		
No State-Maintained Parks/Public Land Areas within Study Area		
TOWN AND COUNTY PARKS/PUBLIC LAND		
Dresden to Whitehall (Route 22)		
Riverside Park	Whitehall	275
Unnamed	Whitehall	25
Selkirk to Cementon		
Mosher Park	Ravena	20
Haverstraw Bay Bypass Route		
No Local or County Parks, Recreational Areas, or Open Space Areas within Study Area		
Hell Gate Bypass Route		
Randall's Island	Manhattan, New York City	103
Pulaski Park	Bronx, New York City	555
Astoria to Rainey Route		
Hallets Cove Playground	Astoria, Queens, New York City	592
Hoyt Playground	Astoria, Queens, New York City	0
Rainey Park	Astoria, Queens, New York City	514
Ravenswood Playground	Astoria, Queens, New York City	482
Socrates Sculpture Park	Astoria, Queens, New York City	420
Two Coves Community Garden	Astoria, Queens, New York City	220
Van Alst Playground	Astoria, Queens, New York City	431

Table 2-4
Parks/Public Lands within 600 feet of the Underground Transmission Cable Construction Zone

Park/Public Land	Community	MP	Approximate Distance from Centerline (feet)
STATE PARKS/PUBLIC LAND			
Dresden to Whitehall (Route 22)			
Adirondack Park	Dresden	101.3	0
Whitehall to Cementon (Railroad)			
Wilton Wildlife Preserve and Park	Wilton	144.2	0
Saratoga Spa State Park	Saratoga Springs	155.4	0
Saratoga Nursery	Saratoga Springs	155.4	25
Five Rivers Environmental Education Center	New Scotland	191.8	0
Haverstraw Bay Bypass Route			
Haverstraw Beach State Park	Haverstraw	300.8	0
Hook Mountain State Park	Clarkstown	301.2	0
Hell Gate Bypass Route			
No State-Maintained Parks/Public Land Areas within Study Area			
Luyster Creek Converter Station			
No State-Maintained Parks/Public Land Areas within Study Area			
TOWN AND COUNTY PARKS/PUBLIC LAND			
Dresden to Whitehall (Route 22)			
Unnamed	Whitehall	111.9	0
Riverside Park	Whitehall	112.2	170
Whitehall to Cementon (Railroad)			
Bertha E. Smith Park	Northumberland	141.0	160
Gansevoort Town Park	Northumberland	141.0	55
Saratoga County Forest Land (Fire Pond Tract)	Northumberland	142.6	480
Saratoga County Forest Land (Adj. to Wilton Mall)	Wilton	145.9	580
Gavin Park	Wilton	148.6	75
Hillhurst Park	Schenectady	174.7	90
Roger Keenholts Park	Guilderland	184.1	155
Jim Nichols Oark	New Scotland	188.4	50
Mosher Park	Ravena	203.0	0
Haverstraw Bay Bypass Route			
No Local or County Parks, Recreational Areas, or Open Space Areas within Study Area			
Hell Gate Bypass Route			
Randall's Island	Manhattan, New York City	330.9	80
Luyster Creek Converter Station			
No Local or County Parks, Recreational Areas, or Open Space Areas within Study Area			

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
Dresden to Whitehall (Route 22)						
101.3	101.4	334.82	Water			Unknown
101.4	101.5	506.84	Saco silt loam	Frequent	Very poorly drained	All hydric
101.5	101.6	522.38	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
101.6	101.6	206.24	Oakville loamy fine sand, 5 to 15 percent slopes	None	Well drained	Not hydric
101.6	101.8	822.85	Pits, gravel and sand			Unknown
101.8	101.9	962.40	Farmington-Rock outcrop association, nearly level through moderately steep	None	Well drained	Unknown
101.9	102.3	2159.41	Oakville loamy fine sand, 5 to 15 percent slopes	None	Well drained	Not hydric
102.3	102.4	138.73	Pits, gravel and sand			Unknown
102.4	102.7	1663.93	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
102.7	103.0	1501.61	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
103.0	103.0	251.30	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
103.0	103.2	1067.15	Charlton soils, very stony, gently sloping and sloping	None	Well drained	Not hydric
103.2	103.5	1677.20	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
103.5	103.7	890.50	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
103.7	103.9	1011.11	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
103.9	104.6	3617.15	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
104.6	104.8	1326.19	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
104.8	104.9	202.27	Hoosic gravelly sandy loam, rolling and hilly	None	Somewhat excessively drained	Not hydric
104.9	104.9	280.13	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
104.9	105.0	476.22	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
105.0	105.5	2319.83	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
105.5	105.7	1494.30	Charlton soils, very stony, gently sloping and sloping	None	Well drained	Not hydric
105.7	105.9	709.49	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
105.9	105.9	20.34	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
105.9	105.9	329.25	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
105.9	106.1	945.30	Charlton soils, very stony, moderately steep and steep	None	Well drained	Not hydric
106.1	106.1	60.52	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
106.1	107.0	4441.01	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
107.0	107.2	982.70	Rock outcrop-Hollis association, moderately steep through very steep			Unknown
107.2	107.5	1770.84	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
107.5	107.6	761.75	Rock outcrop-Hollis association, moderately steep through very steep			Unknown
107.6	107.8	789.61	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
107.8	108.3	2701.08	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
108.3	108.4	513.23	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
108.4	109.2	4463.73	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
109.2	109.4	827.48	Rock outcrop-Vergennes association, gently sloping through moderately steep			Unknown
109.4	109.4	186.14	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
109.4	109.6	697.20	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
109.6	109.6	285.14	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
109.6	109.7	321.16	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
109.7	109.7	184.93	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
109.7	109.8	309.60	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
109.8	109.8	371.13	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
109.8	110.0	844.47	Water			Unknown
110.0	110.1	446.74	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
110.1	110.1	294.66	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
110.1	110.3	746.36	Kingsbury silty clay, 2 to 6 percent slopes	None	Somewhat poorly drained	Not hydric
110.3	110.3	228.56	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
110.3	110.4	203.13	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
110.4	110.5	510.56	Kingsbury silty clay, 2 to 6 percent slopes	None	Somewhat poorly drained	Not hydric
110.5	110.5	431.21	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
110.5	110.7	922.07	Rock outcrop-Vergennes association, gently sloping through moderately steep			Unknown
110.7	110.8	237.21	Kingsbury silty clay, 2 to 6 percent slopes	None	Somewhat poorly drained	Not hydric
110.8	111.1	1781.95	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
111.1	111.8	3786.18	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
111.8	111.9	303.87	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
111.9	111.9	216.59	Limerick silt loam	Frequent	Poorly drained	All hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
111.9	112.1	797.20	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
112.1	112.1	308.89	Limerick silt loam	Frequent	Poorly drained	All hydric
Whitehall to Cementon (Railroad)						
112.1	112.2	156.11	Limerick silt loam	Frequent	Poorly drained	All hydric
112.2	114.3	11292.08	Orthents and Psamments	None	Well drained	Not hydric
114.3	114.7	2221.68	Limerick silt loam	Frequent	Poorly drained	All hydric
114.7	114.7	68.00	Saco silt loam	Frequent	Very poorly drained	All hydric
114.7	114.8	333.62	Limerick silt loam	Frequent	Poorly drained	All hydric
114.8	115.0	990.40	Saco silt loam	Frequent	Very poorly drained	All hydric
115.0	115.0	347.97	Limerick silt loam	Frequent	Poorly drained	All hydric
115.0	115.1	206.00	Saco silt loam	Frequent	Very poorly drained	All hydric
115.1	115.2	671.58	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
115.2	115.2	99.25	Water			Unknown
115.2	115.6	1946.24	Saco silt loam	Frequent	Very poorly drained	All hydric
115.6	115.7	630.33	Orthents and Psamments	None	Well drained	Not hydric
115.7	116.0	1412.32	Teel silt loam	Occasional	Moderately well drained	Not hydric
116.0	116.0	210.02	Hartland very fine sandy loam, 0 to 2 percent slopes	None	Well drained	Not hydric
116.0	116.1	485.68	Orthents and Psamments	None	Well drained	Not hydric
116.1	116.2	613.04	Hartland very fine sandy loam, 0 to 2 percent slopes	None	Well drained	Not hydric
116.2	116.3	106.41	Orthents and Psamments	None	Well drained	Not hydric
116.3	116.5	1159.24	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
116.5	116.5	385.00	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
116.5	116.8	1488.40	Orthents and Psamments	None	Well drained	Not hydric
116.8	116.8	105.60	Covington silty clay loam	None	Poorly drained	All hydric
116.8	116.9	93.94	Water			Unknown
116.9	116.9	392.62	Covington silty clay loam	None	Poorly drained	All hydric
116.9	117.6	3666.97	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
117.6	117.7	175.17	Orthents and Psamments	None	Well drained	Not hydric
117.7	117.7	131.19	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
117.7	118.1	1901.19	Orthents and Psamments	None	Well drained	Not hydric
118.1	118.1	455.81	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
118.1	118.6	2437.39	Orthents and Psamments	None	Well drained	Not hydric
118.6	118.7	406.33	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
118.7	118.8	525.97	Orthents and Psamments	None	Well drained	Not hydric
118.8	119.1	1451.46	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
119.1	119.2	630.56	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
119.2	119.3	485.74	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
119.3	119.5	1028.18	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
119.5	119.6	843.97	Pits, quarry			Unknown
119.6	120.4	4336.94	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
120.4	120.6	920.98	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
120.6	120.7	493.65	Saco silt loam	Frequent	Very poorly drained	All hydric
120.7	122.4	8824.96	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
122.4	122.5	554.48	Limerick silt loam	Frequent	Poorly drained	All hydric
122.5	122.9	2422.27	Saco silt loam	Frequent	Very poorly drained	All hydric
122.9	123.0	50.16	Water			Unknown
123.0	123.0	103.04	Saco silt loam	Frequent	Very poorly drained	All hydric
123.0	123.1	798.34	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
123.1	124.4	6663.52	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
124.4	124.5	652.02	Hartland very fine sandy loam, 2 to 6 percent slopes	None	Well drained	Not hydric
124.5	124.7	1201.22	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
124.7	124.9	1023.97	Hartland very fine sandy loam, 2 to 6 percent slopes	None	Well drained	Not hydric
124.9	125.7	3854.92	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
125.7	125.7	22.28	Orthents and Psamments	None	Well drained	Not hydric
125.7	126.0	1784.06	Covington silty clay loam	None	Poorly drained	All hydric
126.0	126.0	232.98	Claverack loamy fine sand, 0 to 2 percent slopes	None	Moderately well drained	Not hydric
126.0	126.6	3032.51	Covington silty clay loam	None	Poorly drained	All hydric
126.6	127.0	1773.42	Claverack loamy fine sand, 0 to 2 percent slopes	None	Moderately well drained	Not hydric
127.0	127.3	1701.67	Covington silty clay loam	None	Poorly drained	All hydric
127.3	127.4	688.70	Claverack loamy fine sand, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
127.4	128.1	3593.34	Kingsbury silty clay, 2 to 6 percent slopes	None	Somewhat poorly drained	Not hydric
128.1	128.5	2428.08	Covington silty clay loam	None	Poorly drained	All hydric
128.5	128.8	1419.66	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
128.8	130.2	7047.29	Orthents and Psamments	None	Well drained	Not hydric
130.2	131.4	6366.59	Covington silty clay loam	None	Poorly drained	All hydric
131.4	131.6	1074.60	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
131.6	131.7	735.25	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
131.7	131.7	49.12	Water			Unknown
131.7	131.7	47.24	Covington silty clay loam	None	Poorly drained	All hydric
131.7	131.7	99.50	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
131.7	131.8	364.15	Kingsbury silty clay, 0 to 2 percent slopes	None	Somewhat poorly drained	Not hydric
131.8	132.6	4175.24	Carlisle muck	None	Very poorly drained	All hydric
132.6	132.6	80.18	Covington silty clay loam	None	Poorly drained	All hydric

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Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
132.6	132.7	605.30	Carlisle muck	None	Very poorly drained	All hydric
132.7	132.7	15.04	Covington silty clay loam	None	Poorly drained	All hydric
132.7	132.9	702.90	Claverack loamy fine sand, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
132.9	133.8	4709.22	Claverack loamy fine sand, 0 to 2 percent slopes	None	Moderately well drained	Not hydric
133.8	134.0	1084.97	Wallington silt loam, sandy substratum	None	Somewhat poorly drained	Not hydric
134.0	134.1	858.55	Claverack loamy fine sand, 0 to 2 percent slopes	None	Moderately well drained	Not hydric
134.1	134.2	353.37	Wallington silt loam, sandy substratum	None	Somewhat poorly drained	Not hydric
134.2	135.0	4255.88	Claverack loamy fine sand, 0 to 2 percent slopes	None	Moderately well drained	Not hydric
135.0	135.0	259.17	Water			Unknown
135.0	135.1	132.15	Orthents and Psamments	None	Well drained	Not hydric
135.1	135.1	196.98	Oakville loamy fine sand, 0 to 5 percent slopes	None	Well drained	Not hydric
135.1	135.2	404.52	Orthents and Psamments	None	Well drained	Not hydric
135.2	135.3	479.11	Water			Unknown
135.3	135.3	107.18	Water			Unknown
135.3	135.4	286.84	Limerick-Saco complex	Frequent	Poorly drained	All hydric
135.4	135.5	696.79	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
135.5	135.5	302.23	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
135.5	135.6	396.14	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
135.6	135.7	574.03	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
135.7	136.1	1774.84	Unadilla very fine sandy loam, 8 to 15 percent slopes	None	Well drained	Not hydric
136.1	136.2	807.03	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
136.2	136.7	2515.28	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
136.7	137.0	1400.74	Rhinebeck silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
137.0	137.1	644.00	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
137.1	137.1	294.09	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
137.1	137.2	436.58	Teel silt loam	Occasional	Moderately well drained	Not hydric
137.2	137.4	884.14	Unadilla very fine sandy loam, 3 to 8 percent slopes	None	Well drained	Not hydric
137.4	137.5	411.02	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
137.5	137.6	546.11	Rhinebeck silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
137.6	137.7	586.32	Shaker very fine sandy loam	None	Poorly drained	All hydric
137.7	137.8	426.99	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
137.8	137.9	871.98	Fluvaqvents frequently flooded	Frequent	Poorly drained	All hydric
137.9	138.0	208.26	Shaker very fine sandy loam	None	Poorly drained	All hydric
138.0	138.0	450.30	Elmridge very fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
138.0	138.0	10.20	Shaker very fine sandy loam	None	Poorly drained	All hydric
138.0	138.1	97.88	Elmridge very fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
138.1	138.1	439.35	Shaker very fine sandy loam	None	Poorly drained	All hydric

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Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
138.1	138.2	88.45	Elmridge very fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
138.2	138.4	1149.24	Shaker very fine sandy loam	None	Poorly drained	All hydric
138.4	138.5	711.87	Elmridge very fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
138.5	138.6	238.44	Fluvaqvents frequently flooded	Frequent	Poorly drained	All hydric
138.6	139.0	2515.67	Wareham loamy sand	None	Poorly drained	All hydric
139.0	139.1	90.34	Madalin mucky silty clay loam	None	Very poorly drained	All hydric
139.1	139.2	974.16	Wareham loamy sand	None	Poorly drained	All hydric
139.2	139.3	527.47	Shaker very fine sandy loam	None	Poorly drained	All hydric
139.3	139.6	1228.59	Rhinebeck silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
139.6	139.7	516.88	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
139.7	139.9	1149.64	Rhinebeck silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
139.9	140.2	1451.15	Oakville and Windsor soils, 25 to 35 percent slopes	None	Well drained	Not hydric
140.2	140.3	464.13	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
140.3	140.5	1144.72	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
140.5	140.6	883.77	Cosad fine sandy loam	None	Somewhat poorly drained	Not hydric
140.6	141.3	3363.82	Oakville loamy fine sand, nearly level	None	Well drained	Not hydric
141.3	141.3	13.77	Rhinebeck silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
141.3	141.4	774.21	Rhinebeck silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
141.4	141.7	1273.70	Cosad fine sandy loam	None	Somewhat poorly drained	Not hydric
141.7	142.1	2495.20	Rhinebeck silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
142.1	142.6	2366.33	Oakville loamy fine sand, nearly level	None	Well drained	Not hydric
142.6	142.8	1278.59	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
142.8	143.0	1027.91	Wareham loamy sand	None	Poorly drained	All hydric
143.0	143.3	1249.42	Deerfield loamy fine sand, nearly level	None	Moderately well drained	Not hydric
143.3	143.4	598.84	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
143.4	143.5	714.12	Wareham loamy sand	None	Poorly drained	All hydric
143.5	143.6	240.21	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
143.6	143.6	332.20	Wareham loamy sand	None	Poorly drained	All hydric
143.6	144.6	5388.90	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
144.6	144.8	641.38	Oakville loamy fine sand, rolling	None	Well drained	Not hydric
144.8	144.8	283.91	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
144.8	145.1	1368.05	Oakville loamy fine sand, rolling	None	Well drained	Not hydric
145.1	145.1	212.95	Wareham loamy sand	None	Poorly drained	All hydric
145.1	145.4	1374.45	Oakville loamy fine sand, nearly level	None	Well drained	Not hydric
145.4	145.5	892.39	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
145.5	145.9	1694.86	Oakville loamy fine sand, nearly level	None	Well drained	Not hydric
145.9	146.0	589.51	Deerfield loamy fine sand, nearly level	None	Moderately well drained	Not hydric
146.0	146.2	941.83	Oakville loamy fine sand, nearly level	None	Well drained	Not hydric
146.2	146.5	1774.67	Wareham loamy sand	None	Poorly drained	All hydric

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Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
146.5	146.5	329.61	Oakville loamy fine sand, nearly level	None	Well drained	Not hydric
146.5	146.7	924.58	Oakville loamy fine sand, nearly level	None	Well drained	Not hydric
146.7	147.3	2786.92	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
147.3	147.3	183.76	Oakville loamy fine sand, rolling	None	Well drained	Not hydric
147.3	148.1	4112.40	Oakville loamy fine sand, undulating	None	Well drained	Not hydric
148.1	148.1	386.38	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
148.1	148.3	945.14	Deerfield loamy fine sand, nearly level	None	Moderately well drained	Not hydric
148.3	148.9	2992.99	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
148.9	149.3	2031.19	Windsor loamy sand, nearly level	None	Excessively drained	Not hydric
149.3	149.5	1082.04	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
149.5	149.6	601.77	Fluvaqvents frequently flooded	Frequent	Poorly drained	All hydric
149.6	149.6	110.94	Oakville and Windsor soils, 25 to 35 percent slopes	None	Well drained	Not hydric
149.6	150.2	2942.22	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
150.2	151.3	5727.64	Windsor loamy sand, rolling	None	Excessively drained	Not hydric
151.3	151.4	737.68	Rhinebeck silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
151.4	151.4	4.61	Windsor loamy sand, rolling	None	Excessively drained	Not hydric
151.4	151.4	37.87	Rhinebeck silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
151.4	151.4	5.00	Windsor loamy sand, rolling	None	Excessively drained	Not hydric
151.4	151.4	54.95	Rhinebeck silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
151.4	151.4	17.99	Windsor loamy sand, rolling	None	Excessively drained	Not hydric
151.4	151.6	1036.71	Rhinebeck silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
151.6	152.3	3613.38	Rhinebeck silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
152.3	152.4	329.65	Hudson silt loam, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
152.4	152.6	1384.79	Deerfield loamy fine sand, undulating	None	Moderately well drained	Not hydric
152.6	152.9	1245.57	Deerfield loamy fine sand, nearly level	None	Moderately well drained	Not hydric
152.9	153.1	1321.02	Windsor loamy sand, rolling	None	Excessively drained	Not hydric
153.1	153.3	1128.64	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
153.3	153.5	1196.33	Deerfield loamy fine sand, nearly level	None	Moderately well drained	Not hydric
153.5	153.7	674.11	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
153.7	153.8	661.12	Madalin mucky silty clay loam	None	Very poorly drained	All hydric
153.8	154.7	4770.43	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
154.7	155.0	1476.72	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
155.0	155.2	1270.05	Deerfield loamy fine sand, undulating	None	Moderately well drained	Not hydric
155.2	155.3	175.97	Wareham loamy sand	None	Poorly drained	All hydric
155.3	155.3	336.99	Claverack loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
155.3	155.4	283.09	Cosad fine sandy loam	None	Somewhat poorly drained	Not hydric
155.4	155.5	537.31	Wareham loamy sand	None	Poorly drained	All hydric
155.5	157.4	9935.12	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
157.4	157.4	322.28	Deerfield loamy fine sand, nearly level	None	Moderately well drained	Not hydric
157.4	157.6	1172.07	Windsor loamy sand, undulating	None	Excessively drained	Not hydric
157.6	157.8	730.50	Limerick-Saco complex	Frequent	Poorly drained	All hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
157.8	157.9	468.01	Sun silt loam	None	Poorly drained	All hydric
157.9	158.0	880.40	Fluvaqvents frequently flooded	Frequent	Poorly drained	All hydric
158.0	158.2	718.52	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
158.2	158.4	975.21	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric
158.4	158.6	1255.51	Manlius-Nassau complex, undulating, rocky	None	Well drained	Not hydric
158.6	158.6	274.19	Deerfield loamy fine sand, nearly level	None	Moderately well drained	Not hydric
158.6	159.3	3311.41	Manlius-Nassau complex, undulating, rocky	None	Well drained	Not hydric
159.3	159.7	2438.21	Allis silt loam	None	Poorly drained	All hydric
159.7	159.9	1019.41	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
159.9	160.3	2004.07	Allis silt loam	None	Poorly drained	All hydric
160.3	160.5	972.63	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
160.5	160.6	825.90	Broadalbin silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
160.6	161.2	2692.88	Manlius-Nassau complex, undulating, rocky	None	Well drained	Not hydric
161.2	161.4	1156.23	Mosherville silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
161.4	161.6	1414.08	Mosherville silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
161.6	161.9	1573.19	Sun silt loam	None	Poorly drained	All hydric
161.9	162.0	95.50	Mosherville silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
162.0	162.0	176.74	Sun silt loam	None	Poorly drained	All hydric
162.0	162.3	1444.55	Mosherville silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
162.3	162.4	581.57	Sun silt loam	None	Poorly drained	All hydric
162.4	162.5	693.03	Mosherville silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
162.5	162.5	74.36	Sun silt loam	None	Poorly drained	All hydric
162.5	162.6	278.15	Mosherville silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
162.6	162.7	501.84	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric
162.7	163.1	2225.00	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
163.1	163.1	197.46	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric
163.1	164.0	4417.03	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
164.0	164.7	3927.56	Allis silt loam	None	Poorly drained	All hydric
164.7	164.9	787.80	Palms muck	None	Very poorly drained	All hydric
164.9	165.1	1384.61	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric
165.1	165.2	221.28	Palms muck	None	Very poorly drained	All hydric
165.2	165.3	608.36	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric
165.3	165.5	1240.08	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
165.5	165.5	10.08	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
165.5	165.6	595.68	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
165.6	166.3	3372.61	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric
166.3	166.3	374.42	Broadalbin-Manlius-Nassau, complex, rolling	None	Moderately well drained	Not hydric
166.3	167.0	3298.12	Broadalbin-Manlius-Nassau, complex, undulating	None	Moderately well drained	Not hydric
167.0	167.1	548.21	Mosherville-Hornell complex, undulating	None	Somewhat poorly drained	Not hydric
167.1	167.1	259.41	Allis silt loam	None	Poorly drained	All hydric
167.1	167.4	1762.33	Manlius-Nassau complex, undulating, rocky	None	Well drained	Not hydric
167.4	168.1	3292.12	Burdett silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
168.1	168.1	124.15	Nunda silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
168.1	168.2	602.95	Ilion silt loam	None	Poorly drained	All hydric
168.2	168.4	1240.71	Ilion silt loam, 0 to 3 percent slopes	None	Poorly drained	All hydric
168.4	168.6	688.28	Fredon silt loam	None	Somewhat poorly drained	All hydric
168.6	168.7	517.71	Teel silt loam	Occasional	Moderately well drained	Not hydric
168.7	168.8	505.68	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
168.8	168.9	459.57	Teel silt loam	Occasional	Moderately well drained	Not hydric
168.9	168.9	52.32	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
168.9	168.9	133.59	Teel silt loam	Occasional	Moderately well drained	Not hydric
168.9	169.0	560.05	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
169.0	169.4	2187.84	Raynham silt loam	None	Somewhat poorly drained	Not hydric
169.4	169.5	591.69	Elnora loamy fine sand	None	Moderately well drained	Not hydric
169.5	169.9	2178.07	Raynham silt loam	None	Somewhat poorly drained	Not hydric
169.9	170.4	2509.41	Madalin silty clay loam	None	Poorly drained	All hydric
170.4	171.1	3664.06	Cut and fill land	None	Somewhat excessively drained	Not hydric
171.1	171.4	1347.77	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
171.4	171.5	890.41	Wayland silt loam	Frequent	Poorly drained	All hydric
171.5	171.6	599.86	Cut and fill land	None	Somewhat excessively drained	Not hydric
171.6	171.7	482.24	Water			Unknown
171.7	171.8	264.82	Cut and fill land	None	Somewhat excessively drained	Not hydric
171.8	172.0	1001.57	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
172.0	172.0	380.44	Burdett-Scriba channery silt loams, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
172.0	172.1	316.26	Nunda channery silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
172.1	172.5	1820.04	Burdett-Scriba channery silt loams, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
172.5	174.5	10678.56	Cut and fill land	None	Somewhat excessively drained	Not hydric
174.5	176.4	9948.51	Colonie and Plainfield soils, steep	None	Well drained	Not hydric
176.4	176.5	636.34	Colonie loamy fine sand, 0 to 3 percent slopes	None	Well drained	Not hydric
176.5	176.6	695.47	Plainfield loamy sand, 0 to 3 percent slopes	None	Excessively drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
176.6	176.7	274.85	Gravel pits		Somewhat excessively drained	Unknown
176.7	176.9	1313.62	Plainfield loamy sand, 0 to 3 percent slopes	None	Excessively drained	Not hydric
176.9	177.0	286.03	Gravel pits		Somewhat excessively drained	Unknown
177.0	177.1	479.26	Plainfield loamy sand, 0 to 3 percent slopes	None	Excessively drained	Not hydric
177.1	177.2	885.66	Mardin gravelly silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
177.2	178.2	4898.71	Plainfield loamy sand, 0 to 3 percent slopes	None	Excessively drained	Not hydric
178.2	178.3	543.95	Granby loamy fine sand	None	Poorly drained	All hydric
178.3	178.6	1966.82	Plainfield loamy sand, 0 to 3 percent slopes	None	Excessively drained	Not hydric
178.6	179.0	1749.04	Junius loamy fine sand	None	Somewhat poorly drained	Not hydric
179.0	179.0	262.30	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
179.0	179.0	0.00	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
179.0	179.0	1.60	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
179.0	179.0	50.40	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
179.0	179.0	140.03	Junius loamy fine sand	None	Somewhat poorly drained	Not hydric
179.0	179.4	1782.37	Madalin silty clay loam	None	Poorly drained	All hydric
179.4	179.4	77.53	Elnora loamy fine sand	None	Moderately well drained	Not hydric
179.4	179.4	254.55	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
179.4	179.6	749.00	Elnora loamy fine sand	None	Moderately well drained	Not hydric
179.6	179.6	295.54	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
179.6	179.7	98.26	Junius loamy fine sand	None	Somewhat poorly drained	Not hydric
179.7	179.7	30.39	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
179.7	179.7	274.06	Junius loamy fine sand	None	Somewhat poorly drained	Not hydric
179.7	179.7	121.69	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
179.7	179.8	177.30	Madalin silty clay loam	None	Poorly drained	All hydric
179.8	179.8	113.71	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
179.8	179.8	85.04	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
179.8	179.8	194.90	Madalin silty clay loam	None	Poorly drained	All hydric
179.8	179.9	171.14	Hudson silty clay loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
179.9	180.0	405.14	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
180.0	180.0	24.81	Claverack loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
180.0	180.0	260.09	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
180.0	180.0	199.03	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
180.0	180.1	156.87	Claverack loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
180.1	180.1	243.59	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
180.1	180.2	433.40	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric

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Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
180.2	180.5	1291.79	Cheektowaga fine sandy loam	None	Very poorly drained	All hydric
180.5	180.5	132.66	Granby loamy fine sand	None	Poorly drained	All hydric
180.5	180.5	44.59	Granby loamy fine sand	None	Very poorly drained	All hydric
180.5	180.7	868.42	Cosad loamy fine sand	None	Somewhat poorly drained	Not hydric
180.7	180.7	310.85	Fluvaquents-Udifluvents complex, frequently flooded	Frequent	Poorly drained	Partially hydric
180.7	180.7	118.98	Cosad loamy fine sand	None	Somewhat poorly drained	Not hydric
180.7	180.8	238.06	Fluvaquents-Udifluvents complex, frequently flooded	Frequent	Poorly drained	Partially hydric
180.8	180.8	166.50	Stafford loamy fine sand	None	Somewhat poorly drained	Not hydric
180.8	180.8	133.27	Fluvaquents-Udifluvents complex, frequently flooded	Frequent	Poorly drained	Partially hydric
180.8	180.9	212.86	Shaker fine sandy loam	None	Poorly drained	All hydric
180.9	180.9	108.16	Colonie loamy fine sand, rolling	None	Somewhat excessively drained	Not hydric
180.9	180.9	120.92	Shaker fine sandy loam	None	Poorly drained	All hydric
180.9	181.0	265.47	Fluvaquents-Udifluvents complex, frequently flooded	Frequent	Poorly drained	Partially hydric
181.0	181.0	117.42	Shaker fine sandy loam	None	Poorly drained	All hydric
181.0	181.0	243.73	Colonie loamy fine sand, rolling	None	Somewhat excessively drained	Not hydric
181.0	181.2	896.63	Raynham very fine sandy loam	None	Poorly drained	All hydric
181.2	181.2	68.09	Elmridge fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
181.2	181.4	967.76	Elnora loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
181.4	181.4	236.81	Stafford loamy fine sand	None	Somewhat poorly drained	Not hydric
181.4	181.5	323.23	Elmridge fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
181.5	181.6	299.10	Raynham very fine sandy loam	None	Poorly drained	All hydric
181.6	181.6	170.34	Birdsall mucky silt loam	None	Very poorly drained	All hydric
181.6	181.7	324.10	Raynham very fine sandy loam	None	Poorly drained	All hydric
181.7	181.7	208.25	Shaker fine sandy loam	None	Poorly drained	All hydric
181.7	181.8	599.72	Raynham very fine sandy loam	None	Poorly drained	All hydric
181.8	181.9	229.84	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
181.9	181.9	195.87	Elmridge fine sandy loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
181.9	181.9	191.66	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
181.9	182.0	244.58	Shaker fine sandy loam	None	Poorly drained	All hydric
182.0	182.0	175.37	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.0	182.0	171.29	Raynham very fine sandy loam	None	Poorly drained	All hydric
182.0	182.1	83.78	Elmridge fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.1	182.1	143.08	Raynham very fine sandy loam	None	Poorly drained	All hydric
182.1	182.1	104.42	Elmridge fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.1	182.2	309.88	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.2	182.2	350.33	Shaker fine sandy loam	None	Poorly drained	All hydric

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Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
182.2	182.3	149.50	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.3	182.3	10.22	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
182.3	182.3	210.76	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.3	182.4	460.05	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.4	182.4	151.18	Raynham very fine sandy loam	None	Poorly drained	All hydric
182.4	182.5	342.41	Shaker fine sandy loam	None	Poorly drained	All hydric
182.5	182.6	505.70	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
182.6	182.6	72.38	Raynham very fine sandy loam	None	Poorly drained	All hydric
182.6	182.7	474.27	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
182.7	182.9	1330.73	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
182.9	183.0	216.63	Unadilla silt loam, 15 to 25 percent slopes	None	Well drained	Not hydric
183.0	183.0	161.96	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
183.0	183.0	135.08	Unadilla silt loam, 15 to 25 percent slopes	None	Well drained	Not hydric
183.0	183.2	682.47	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
183.2	183.2	200.52	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
183.2	183.7	2622.73	Scio silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
183.7	183.7	222.37	Colonie loamy fine sand, hilly	None	Somewhat excessively drained	Not hydric
183.7	183.8	212.91	Water			
183.8	183.8	176.17	Colonie loamy fine sand, hilly	None	Somewhat excessively drained	Not hydric
183.8	183.9	506.83	Riverhead fine sandy loam, 0 to 3 percent slopes	None	Well drained	Not hydric
183.9	183.9	146.17	Riverhead fine sandy loam, 3 to 8 percent slopes	None	Well drained	Not hydric
183.9	184.2	1296.43	Udorthents, loamy	None	Moderately well drained	Not hydric
184.2	184.2	246.27	Sudbury fine sandy loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
184.2	184.4	1156.05	Udorthents, loamy	None	Moderately well drained	Not hydric
184.4	184.7	1187.19	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
184.7	184.7	433.64	Valois gravelly loam, 3 to 8 percent slopes	None	Well drained	Not hydric
184.7	185.0	1124.88	Udorthents, loamy-Urban land complex	None	Well drained	Unknown
185.0	186.4	7775.15	Udorthents, loamy	None	Moderately well drained	Not hydric
186.4	186.5	258.89	Burdett silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
186.5	186.7	1374.79	Ilion silt loam	None	Poorly drained	All hydric
186.7	186.8	558.77	Burdett silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
186.8	187.4	2924.77	Burdett silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
187.4	187.6	843.90	Burdett silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
187.6	187.8	1228.75	Ilion silt loam	None	Poorly drained	All hydric
187.8	188.1	1540.30	Udorthents, loamy-Urban land complex	None	Well drained	Unknown
188.1	188.3	1120.37	Udorthents, loamy	None	Moderately well drained	Not hydric
188.3	188.4	612.16	Fluvaquents-Udifluvents complex, frequently flooded	Frequent	Poorly drained	Partially hydric
188.4	188.5	183.28	Chenango gravelly silt loam, loamy substratum, 3 to 8 percent slopes	None	Well drained	Not hydric

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Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
188.5	188.5	244.73	Nunda silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
188.5	188.5	51.94	Chenango gravelly silt loam, loamy substratum, 3 to 8 percent slopes	None	Well drained	Not hydric
188.5	188.7	789.56	Urban land			Unknown
188.7	189.2	3056.94	Udorthents, loamy-Urban land complex	None	Well drained	Unknown
189.2	189.2	71.08	Shaker fine sandy loam	None	Poorly drained	All hydric
189.2	189.4	674.60	Riverhead fine sandy loam, 3 to 8 percent slopes	None	Well drained	Not hydric
189.4	189.4	385.67	Chenango gravelly silt loam, loamy substratum, rolling	None	Well drained	Not hydric
189.4	189.5	240.62	Unadilla silt loam, 8 to 15 percent slopes	None	Well drained	Not hydric
189.5	189.5	22.54	Riverhead fine sandy loam, 3 to 8 percent slopes	None	Well drained	Not hydric
189.5	189.6	323.25	Riverhead fine sandy loam, 3 to 8 percent slopes	None	Well drained	Not hydric
189.6	189.8	1045.89	Sudbury fine sandy loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
189.8	189.8	328.44	Fluvaquents-Udifluvents complex, frequently flooded	Frequent	Poorly drained	Partially hydric
189.8	189.9	247.86	Teel silt loam	Occasional	Moderately well drained	Not hydric
189.9	190.0	622.76	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
190.0	190.0	252.46	Chenango channery silt loam, fan, 3 to 8 percent slopes	None	Well drained	Not hydric
190.0	190.3	1582.88	Udorthents, loamy	None	Moderately well drained	Not hydric
190.3	190.4	156.74	Burdett silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
190.4	190.7	1810.06	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
190.7	190.8	351.28	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
190.8	190.8	296.08	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
190.8	190.9	545.80	Chenango channery silt loam, fan, 3 to 8 percent slopes	None	Well drained	Not hydric
190.9	191.0	393.50	Castile gravelly loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
191.0	191.1	405.18	Nunda silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
191.1	191.1	274.81	Wayland silt loam	Frequent	Poorly drained	All hydric
191.1	191.3	674.80	Burdett silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
191.3	191.4	473.37	Burdett silt loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
191.4	191.5	516.22	Burdett silt loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
191.5	191.6	640.65	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
191.6	191.7	594.28	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
191.7	191.8	431.08	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
191.8	191.8	299.69	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
191.8	191.9	497.36	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
191.9	192.0	415.95	Madalin silt loam	None	Poorly drained	All hydric

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Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
192.0	192.1	401.11	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
192.1	192.2	783.05	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
192.2	192.3	296.86	Raynham very fine sandy loam	None	Poorly drained	All hydric
192.3	192.4	726.72	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
192.4	192.4	1.27	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
192.4	192.4	89.88	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
192.4	192.5	252.79	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
192.5	192.5	224.91	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
192.5	192.6	224.16	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
192.6	192.8	1119.19	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
192.8	192.9	535.33	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
192.9	193.0	399.28	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
193.0	193.6	3407.99	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
193.6	196.0	12903.78	Udorthents, clayey-Urban land complex	None	Moderately well drained	Unknown
196.0	196.1	188.86	Scio silt loam, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
196.1	196.3	1401.04	Udorthents, clayey-Urban land complex	None	Moderately well drained	Unknown
196.3	196.4	66.99	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
196.4	196.4	187.14	Udorthents, clayey-Urban land complex	None	Moderately well drained	Unknown
196.4	196.6	946.96	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
196.6	196.7	856.93	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
196.7	196.8	146.87	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
196.8	196.8	76.92	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
196.8	196.8	246.31	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
196.8	196.8	14.59	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
196.8	196.9	170.33	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
196.9	196.9	40.93	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
196.9	197.1	1308.34	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
197.1	197.2	693.79	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
197.2	198.5	6692.78	Udorthents, clayey-Urban land complex	None	Moderately well drained	Unknown
198.5	198.5	144.47	Udipsamments-Urban land complex	None	Somewhat excessively drained	Unknown
198.5	198.6	468.42	Stafford loamy fine sand	None	Somewhat poorly drained	Not hydric
198.6	199.0	2155.40	Elnora loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
199.0	199.1	396.51	Udipsamments, smoothed	None	Well drained	Not hydric
199.1	199.3	1106.97	Udipsamments, smoothed	None	Well drained	Not hydric
199.3	199.5	959.87	Elnora loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
199.5	199.5	170.01	Colonie loamy fine sand, 3 to 8 percent slopes	None	Well drained	Not hydric
199.5	199.6	605.45	Elnora loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
199.6	199.9	1271.32	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
199.9	200.0	765.85	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
200.0	200.1	566.46	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
200.1	200.2	126.14	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
200.2	200.2	62.75	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
200.2	200.3	475.68	Hudson silt loam, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
200.3	200.5	1183.07	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
200.5	200.6	507.85	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
200.6	200.6	95.43	Raynham very fine sandy loam	None	Poorly drained	All hydric
200.6	200.7	554.75	Wakeland silt loam	Occasional	Somewhat poorly drained	Not hydric
200.7	200.7	136.87	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
200.7	200.8	426.31	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
200.8	200.9	255.75	Udorthents, clayey-Urban land complex	None	Moderately well drained	Unknown
200.9	201.0	502.03	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
201.0	201.0	172.81	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
201.0	201.4	2184.21	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
201.4	201.5	353.18	Madalin silt loam	None	Poorly drained	All hydric
201.5	202.4	4993.03	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
202.4	203.3	4684.19	Udorthents, loamy	None	Moderately well drained	Not hydric
203.3	203.7	2106.29	Urban land-Udorthents complex, 0 to 8 percent slopes			Unknown
203.7	204.1	1811.33	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
204.1	204.2	593.44	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
204.2	204.2	181.68	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
204.2	204.2	179.01	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
204.2	204.8	2827.29	Covington and Madalin soils	None	Poorly drained	All hydric
204.8	205.0	1082.72	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
205.0	205.9	4723.12	Riverhead loam, rolling	None	Well drained	Not hydric
205.9	205.9	290.17	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
205.9	206.2	1669.44	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
206.2	206.3	460.10	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
206.3	206.4	447.67	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
206.4	206.9	2491.83	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
206.9	207.2	1866.07	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
207.2	207.2	26.25	Valois-Nassau complex, hilly	None	Well drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
207.2	207.4	937.75	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
207.4	207.6	1221.68	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
207.6	207.7	306.41	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
207.7	207.9	834.64	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
207.9	207.9	333.55	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
207.9	208.0	541.10	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
208.0	208.1	281.77	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
208.1	208.1	262.92	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
208.1	208.3	827.21	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
208.3	208.4	481.29	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
208.4	208.6	1196.62	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
208.6	208.8	978.54	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
208.8	209.0	1154.21	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
209.0	209.2	751.18	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
209.2	209.7	2661.44	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
209.7	209.7	328.60	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
209.7	209.8	290.70	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
209.8	209.8	213.32	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
209.8	210.0	830.60	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
210.0	210.1	467.20	Hudson and Vergennes silty clay loams, 8 to 15 percent slopes, severely eroded	None	Moderately well drained	Not hydric
210.1	210.1	97.31	Wayland silt loam	Frequent	Very poorly drained	All hydric
210.1	210.2	754.34	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
210.2	210.3	223.92	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
210.3	210.3	236.12	Wayland silt loam	Frequent	Very poorly drained	All hydric
210.3	210.4	367.66	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
210.4	210.4	353.30	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
210.4	210.9	2447.43	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
210.9	211.1	864.21	Elmridge very fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
211.1	211.1	82.29	Shaker very fine sandy loam	None	Somewhat poorly drained	All hydric
211.1	211.2	385.97	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
211.2	211.5	1841.90	Shaker very fine sandy loam	None	Somewhat poorly drained	All hydric
211.5	211.7	1141.59	Udorthents, loamy	None	Somewhat excessively drained	Not hydric
211.7	212.1	2094.98	Shaker very fine sandy loam	None	Somewhat poorly drained	All hydric
212.1	212.6	2312.64	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
212.6	212.9	1524.01	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
212.9	213.0	936.36	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
213.0	213.3	1561.27	Covington and Madalin soils	None	Poorly drained	All hydric
213.3	213.6	1441.83	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
213.6	213.7	530.47	Covington and Madalin soils	None	Poorly drained	All hydric
213.7	214.5	4270.77	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
214.5	214.7	894.71	Wayland silt loam	Frequent	Very poorly drained	All hydric
214.7	215.2	2985.51	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
215.2	215.3	421.08	Covington and Madalin soils	None	Poorly drained	All hydric
215.3	215.8	2698.75	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
215.8	216.3	2635.17	Covington and Madalin soils	None	Poorly drained	All hydric
216.3	216.4	375.05	Wayland silt loam	Frequent	Very poorly drained	All hydric
216.4	219.5	16332.62	Covington and Madalin soils	None	Poorly drained	All hydric
219.5	219.6	657.02	Nassau channery silt loam, hilly, very rocky	None	Somewhat excessively drained	Not hydric
219.6	219.7	545.14	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
219.7	220.1	1840.12	Nassau channery silt loam, hilly, very rocky	None	Somewhat excessively drained	Not hydric
220.1	220.5	2191.87	Covington and Madalin soils	None	Poorly drained	All hydric
220.5	220.5	23.85	Nassau channery silt loam, rolling	None	Somewhat excessively drained	Not hydric
220.5	220.9	2321.44	Nassau channery silt loam, hilly, very rocky	None	Somewhat excessively drained	Not hydric
220.9	220.9	79.02	Nassau channery silt loam, rolling	None	Somewhat excessively drained	Not hydric
220.9	221.0	112.45	Nassau channery silt loam, hilly, very rocky	None	Somewhat excessively drained	Not hydric
221.0	221.0	10.13	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
221.0	221.0	33.09	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
221.0	221.2	1097.34	Nassau channery silt loam, steep, very rocky	None	Somewhat excessively drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
221.2	221.3	417.03	Nassau channery silt loam, rolling	None	Somewhat excessively drained	Not hydric
221.3	221.3	321.61	Nassau channery silt loam, steep, very rocky	None	Somewhat excessively drained	Not hydric
221.3	221.4	350.36	Water			Unknown
221.4	221.5	626.26	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
221.5	221.6	296.37	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
221.6	221.9	1744.17	Riverhead loam, 0 to 3 percent slopes	None	Well drained	Not hydric
221.9	221.9	256.28	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
221.9	222.0	426.02	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
222.0	222.4	1782.72	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
222.4	222.5	744.77	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
222.5	222.5	235.52	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
222.5	222.7	1009.12	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
222.7	223.8	5608.17	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
223.8	224.3	2489.99	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
224.3	224.7	2111.26	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
224.7	224.9	1253.44	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
224.9	225.0	303.65	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
225.0	225.4	2197.65	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
225.4	225.6	1185.81	Farmington gravelly silt loam, steep, rocky	None	Somewhat excessively drained	Not hydric
225.6	225.6	97.33	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
225.6	226.2	3191.88	Udorthents, loamy	None	Somewhat excessively drained	Not hydric
226.2	226.5	1407.40	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
226.5	226.5	30.42	Covington and Madalin soils	None	Poorly drained	All hydric
226.5	226.7	944.13	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
226.7	226.9	902.69	Udorthents, loamy	None	Somewhat excessively drained	Not hydric
226.9	227.0	585.69	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
227.0	227.0	415.52	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
227.0	227.4	1702.12	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
227.4	227.5	487.83	Farmington gravelly silt loam, steep, rocky	None	Somewhat excessively drained	Not hydric
227.5	227.5	464.25	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
227.5	227.6	506.82	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
227.6	227.9	1215.02	Riverhead loam, 3 to 8 percent slopes	None	Well drained	Not hydric
227.9	227.9	199.47	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
227.9	228.0	442.07	Covington and Madalin soils	None	Poorly drained	All hydric
228.0	228.1	446.96	Farmington gravelly silt loam, hilly, rocky	None	Well drained	Not hydric
228.1	228.3	1339.57	Udorthents, loamy	None	Somewhat excessively drained	Not hydric
228.3	228.4	526.97	Water			Unknown
Haverstraw Bay Bypass Route						
295.4	295.7	1440.36	Water			Unknown
295.7	295.8	366.79	Chatfield-Rock outcrop complex, hilly	None	Well drained	Unknown
295.8	295.9	546.18	Chatfield-Rock outcrop complex, rolling	None	Well drained	Unknown
295.9	295.9	277.36	Chatfield-Rock outcrop complex, hilly	None	Well drained	Unknown
295.9	296.0	360.80	Chatfield-Rock outcrop complex, rolling	None	Well drained	Unknown
296.0	296.1	643.68	Ipswich muck	Frequent	Very poorly drained	All hydric
296.1	296.2	226.13	Yalesville sandy loam, 15 to 25 percent slopes	None	Well drained	Not hydric
296.2	296.4	1308.00	Udorthents, wet substratum	None	Moderately well drained	All hydric
296.4	296.5	668.25	Ipswich muck	Frequent	Very poorly drained	All hydric
296.5	296.5	55.68	Hinckley gravelly loamy sand, 3 to 8 percent slopes	None	Excessively drained	Not hydric
296.5	296.6	109.07	Urban land			Unknown
296.6	296.8	1333.98	Hinckley gravelly loamy sand, 3 to 8 percent slopes	None	Excessively drained	Not hydric
296.8	297.3	2571.81	Hinckley gravelly loamy sand, 15 to 25 percent slopes	None	Excessively drained	Not hydric
297.3	297.3	68.20	Water			Unknown
297.3	297.4	533.40	Ipswich muck	Frequent	Very poorly drained	All hydric
297.4	297.5	329.92	Wethersfield gravelly silt loam, 15 to 25 percent slope s	None	Well drained	Not hydric
297.5	297.8	1791.67	Haven loam, 3 to 8 percent slopes	None	Well drained	Not hydric
297.8	297.8	90.69	Udorthents, smoothed	None	Somewhat excessively drained	Not hydric
297.8	297.8	1.65	Haven loam, 3 to 8 percent slopes	None	Well drained	Not hydric
297.8	298.0	692.10	Urban land			Unknown
298.0	298.2	1149.95	Udorthents, smoothed	None	Somewhat excessively drained	Not hydric
298.2	298.6	2293.30	Hinckley gravelly loamy sand, 3 to 8 percent slopes	None	Excessively drained	Not hydric
298.6	298.9	1319.36	Hinckley-Urban land complex, 0 to 8 percent slopes	None	Excessively drained	Unknown
298.9	299.3	2059.83	Hinckley gravelly loamy sand, 3 to 8 percent slopes	None	Excessively drained	Not hydric
299.3	299.4	815.83	Holyoke-Rock outcrop complex, rolling	None	Well drained	Unknown
299.4	299.7	1504.91	Wethersfield-Urban land complex, 2 to 8 percent slopes	None	Well drained	Unknown

Table 3-1
Soils Along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
299.7	300.3	2966.88	Holyoke-Rock outcrop complex, hilly	None	Well drained	Unknown
300.3	300.7	2356.25	Holyoke-Rock outcrop complex, very steep	None	Well drained	Unknown
300.7	301.7	5309.67	Holyoke-Rock outcrop complex, hilly	None	Well drained	Unknown
301.7	301.9	916.36	Wethersfield gravelly silt loam, 8 to 15 percent slopes	None	Well drained	Not hydric
301.9	302.2	1465.36	Wethersfield gravelly silt loam, 3 to 8 percent slopes	None	Well drained	Not hydric
302.2	302.2	53.82	Udorthents, smoothed	None	Somewhat excessively drained	Not hydric
302.2	302.3	788.38	Wethersfield gravelly silt loam, 3 to 8 percent slopes	None	Well drained	Not hydric
302.3	302.4	478.34	Udorthents, smoothed	None	Somewhat excessively drained	Not hydric
302.4	302.5	542.30	Wethersfield gravelly silt loam, 3 to 8 percent slopes	None	Well drained	Not hydric
302.5	302.5	147.58	Wethersfield gravelly silt loam, 8 to 15 percent slopes	None	Well drained	Not hydric
302.5	302.6	433.45	Holyoke-Rock outcrop complex, hilly	None	Well drained	Unknown
302.6	302.7	589.46	Holyoke-Rock outcrop complex, very steep	None	Well drained	Unknown
302.7	302.8	413.54	Water			Unknown
Hell Gate Bypass Route						
330.2	331.9	1.51	Urban Land			Unknown
Luyster Creek Converter Station						
Soils data for this location does not exist.						

Table 3.1-1
Soils Along the Underground Transmission Cable Corridor (Reconfigured Segments)

Length of Cable through the Soil Unit (feet)	Soil Type	Flooding Frequency	Drainage Classification	Hydric Classification
Dresden to Whitehall (Route 22)				
339.19	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
126.46	Oakville loamy fine sand, 5 to 15 percent slopes	None	Well drained	Not hydric
874.95	Pits, gravel and sand			Unknown
859.67	Farmington-Rock outcrop association, nearly level through moderately steep	None	Well drained	Unknown
2331.23	Oakville loamy fine sand, 5 to 15 percent slopes	None	Well drained	Not hydric
145.21	Pits, gravel and sand			Unknown
1597.10	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
1430.65	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
559.79	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
867.28	Charlton soils, very stony, gently sloping and sloping	None	Well drained	Not hydric
1556.25	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
1228.47	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
776.92	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
3581.21	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
1381.05	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
239.00	Hoosic gravelly sandy loam, rolling and hilly	None	Somewhat excessively drained	Not hydric
247.37	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
486.47	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
2331.04	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
1512.09	Charlton soils, very stony, gently sloping and sloping	None	Well drained	Not hydric
1021.09	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric

Table 3.1-1 Soils Along the Underground Transmission Cable Corridor (Reconfigured Segments)				
919.65	Charlton soils, very stony, moderately steep and steep	None	Well drained	Not hydric
4553.99	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
1046.89	Rock outcrop-Hollis association, moderately steep through very steep			Unknown
1718.26	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
787.29	Rock outcrop-Hollis association, moderately steep through very steep			Unknown
704.14	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
2719.02	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
664.26	Hollis-Rock outcrop association, gently sloping and sloping	None	Well drained	Unknown
4443.66	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
734.47	Rock outcrop-Vergennes association, gently sloping through moderately steep			Unknown
171.24	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
772.70	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
672.05	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
301.49	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
299.79	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
922.07	Water			Unknown
169.17	Saprists, Aquepts, and Aquents	None	Very poorly drained	All hydric
636.08	Hudson and Vergennes soils, steep and very steep	None	Moderately well drained	Not hydric
750.82	Kingsbury silty clay, 2 to 6 percent slopes	None	Somewhat poorly drained	Not hydric
229.86	Vergennes silty clay loam, 2 to 6 percent slopes	None	Moderately well drained	Not hydric
193.73	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
482.77	Kingsbury silty clay, 2 to 6 percent slopes	None	Somewhat poorly drained	Not hydric
443.48	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
933.47	Rock outcrop-Vergennes association, gently sloping through moderately steep			Unknown
2032.16	Hollis-Charlton association, moderately steep and steep	None	Well drained	Not hydric
3798.86	Vergennes silty clay loam, 6 to 12 percent slopes	None	Moderately well drained	Not hydric
962.38	Vergennes silty clay loam, 12 to 20 percent slopes	None	Moderately well drained	Not hydric
Selkirk to Cementon				
1079.00	Udipsamments, smoothed	None	Well drained	Not hydric
1065.91	Elnora loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
185.85	Colonie loamy fine sand, 3 to 8 percent slopes	None	Well drained	Not hydric
615.28	Elnora loamy fine sand, 0 to 3 percent slopes	None	Moderately well drained	Not hydric
1181.75	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
753.31	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
560.60	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
128.07	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
59.51	Claverack loamy fine sand, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
479.33	Hudson silt loam, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
1182.74	Hudson silt loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
582.95	Hudson silt loam, hilly	None	Moderately well drained	Not hydric
527.64	Wakeland silt loam	Occasional	Somewhat poorly drained	Not hydric
180.96	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
648.50	Udorthents, clayey-Urban land complex	None	Moderately well drained	Unknown
519.28	Hudson silt loam, 25 to 45 percent slopes	None	Moderately well drained	Not hydric
169.11	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
2185.13	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
349.92	Madalin silt loam	None	Poorly drained	All hydric
4979.80	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
4655.22	Udorthents, loamy	None	Moderately well drained	Not hydric
2124.66	Urban land-Udorthents complex, 0 to 8 percent slopes			Unknown
1800.56	Rhinebeck silty clay loam, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
591.16	Rhinebeck silty clay loam, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
180.12	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
176.12	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
2811.13	Covington and Madalin soils	None	Poorly drained	All hydric
1080.59	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
4700.16	Riverhead loam, rolling	None	Well drained	Not hydric
281.79	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
1718.52	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
355.92	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric

Table 3.1-1
Soils Along the Underground Transmission Cable Corridor (Reconfigured Segments)

507.68	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
2460.52	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
2796.55	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
11214.00	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
309.97	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
831.10	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
333.62	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
518.64	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
282.18	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
152.13	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
983.90	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
358.43	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
1288.85	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
971.83	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
1131.56	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
759.05	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
2639.40	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
324.63	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
291.97	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
211.33	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
831.45	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
466.55	Hudson and Vergennes silty clay loams, 8 to 15 percent slopes, severely eroded	None	Moderately well drained	Not hydric
79.22	Wayland silt loam	Frequent	Very poorly drained	All hydric
785.29	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
200.02	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
228.07	Wayland silt loam	Frequent	Very poorly drained	All hydric
368.29	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
344.31	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
2439.10	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
860.47	Elmridge very fine sandy loam, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
82.11	Shaker very fine sandy loam	None	Somewhat poorly drained	All hydric
380.87	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
1860.30	Shaker very fine sandy loam	None	Somewhat poorly drained	All hydric
1087.07	Udorthents, loamy	None	Somewhat excessively drained	Not hydric
2146.04	Shaker very fine sandy loam	None	Somewhat poorly drained	All hydric
2297.14	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
1516.00	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
931.29	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
1546.82	Covington and Madalin soils	None	Poorly drained	All hydric
1435.83	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
533.28	Covington and Madalin soils	None	Poorly drained	All hydric
4238.82	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
295.59	Wayland silt loam	Frequent	Very poorly drained	All hydric
116.07	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
490.17	Wayland silt loam	Frequent	Very poorly drained	All hydric
2964.42	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
419.54	Covington and Madalin soils	None	Poorly drained	All hydric
2679.42	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
10305.38	Covington and Madalin soils	None	Poorly drained	All hydric
17.88	Valois-Nassau complex, hilly	None	Well drained	Not hydric
8942.20	Covington and Madalin soils	None	Poorly drained	All hydric
691.38	Nassau channery silt loam, hilly, very rocky	None	Somewhat excessively drained	Not hydric
424.96	Nassau channery silt loam, rolling, very rocky	None	Somewhat excessively drained	Not hydric
1998.08	Nassau channery silt loam, hilly, very rocky	None	Somewhat excessively drained	Not hydric
2044.34	Covington and Madalin soils	None	Poorly drained	All hydric

Table 3.1-1 Soils Along the Underground Transmission Cable Corridor (Reconfigured Segments)				
2427.92	Nassau channery silt loam, hilly, very rocky	None	Somewhat excessively drained	Not hydric
1238.90	Nassau channery silt loam, steep, very rocky	None	Somewhat excessively drained	Not hydric
409.72	Nassau channery silt loam, rolling	None	Somewhat excessively drained	Not hydric
315.40	Nassau channery silt loam, steep, very rocky	None	Somewhat excessively drained	Not hydric
347.60	Water			Unknown
638.68	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
273.13	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
1751.39	Riverhead loam, 0 to 3 percent slopes	None	Well drained	Not hydric
246.84	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
418.92	Hudson and Vergennes soils, 25 to 50 percent slopes	None	Moderately well drained	Not hydric
1762.42	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
769.28	Kingsbury and Rhinebeck soils, 0 to 3 percent slopes	None	Somewhat poorly drained	Not hydric
232.47	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
1013.17	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
5593.81	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
2445.20	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
2115.85	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
1237.82	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
301.90	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
2227.71	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
1149.92	Farmington gravelly silt loam, steep, rocky	None	Somewhat excessively drained	Not hydric
78.64	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
3170.31	Udorthents, loamy	None	Somewhat excessively drained	Not hydric
1392.89	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
4.92	Covington and Madalin soils	None	Poorly drained	All hydric
363.92	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
25.80	Covington and Madalin soils	None	Poorly drained	All hydric
559.06	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	None	Somewhat poorly drained	Not hydric
938.27	Udorthents, loamy	None	Somewhat excessively drained	Not hydric
548.52	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
468.09	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	None	Moderately well drained	Not hydric
1569.61	Hudson and Vergennes soils, 3 to 8 percent slopes	None	Moderately well drained	Not hydric
629.19	Farmington gravelly silt loam, steep, rocky	None	Somewhat excessively drained	Not hydric
234.93	Hudson and Vergennes soils, 8 to 15 percent slopes	None	Moderately well drained	Not hydric
Haverstraw Bay Bypass Route				
829.94	Water			Unknown
263.11	Chatfield-Rock Outcrop Complex, hilly	None	Well Drained	Unknown
554.57	Chatfield-Rock Outcrop Complex, rolling	None	Well Drained	Unknown
285.63	Chatfield-Rock Outcrop Complex, hilly	None	Well Drained	Unknown
400.24	Chatfield-Rock Outcrop Complex, rolling	None	Well Drained	Unknown
619.24	Ipswich Muck	Frequent	Very Poorly Drained	All Hydric
227.04	Yalesville sandy loan, 15 to 25 percent slopes	None	Well Drained	Not Hydric
1,302.41	Udorthents, wet substratum	None	Moderately Well Drained	All Hydric
684.10	Ipswich Muck	Frequent	Very Poorly Drained	All Hydric
1,557.69	Hinckley gravelly loamy sand, 3 to 8 percent slopes	None	Excessively Drained	Not Hydric
2,431.58	Hinckley gravelly loamy sand, 15 to 25 percent slops	None	Excessively Drained	Not Hydric
80.70	Water			Unknown
583.46	Ipswich muck	Frequent	Very Poorly Drained	All Hydric
334.47	Wethersfield gravelly silt loam, 15 to 25 percent slopes	None	Well Drained	Not Hydric
1,747.27	Haven Loam, 3 to 8 percent	None	Well Drained	Not Hydric
85.45	Udorthents, smoothed	None	Somewhat Excessively Drained	Not Hydric
677.67	Urban Land			Unknown
6.25	Haven Loam, 3 to 8 percent slopes	None	Well Drained	Not Hydric

Table 3.1-1 Soils Along the Underground Transmission Cable Corridor (Reconfigured Segments)				
1156.80	Udorthents, smoothed	None	Somewhat Excessively Drained	Not Hydric
2,256.36	Hinckley gravelly loamy sand, 3 to 8 percent slopes	None	Excessively Drained	Not Hydric
1,351.35	Hinckley-Urban land complex, 0 to 8 percent slopes	None	Excessively Drained	Unknown
2,027.07	Hinckley gravelly loamy sand, 3 to 8 percent slopes	None	Excessively Drained	Not Hydric
806.11	Holyoke-Rock Outcrop Complex, rolling	None	Well Drained	Unknown
1,502.15	Wethersfield-Urban Land Complex, 2 to 8 percent slopes	None	Well Drained	Unknown
2,946.80	Holyoke-Rock Outcrop Complex, hilly	None	Well Drained	Unknown
2,332.72	Holyoke-Rock Outcrop Complex, very steep	None	Well Drained	Unknown
4,088.77	Holyoke-Rock Outcrop Complex, hilly	None	Well Drained	Unknown
745.30	Pits, quarry			Unknown
1,812.20	Holyoke-Rock Outcrop Complex, very steep	None	Well Drained	Unknown
16.30	Water			Unknown
24.00	Holyoke-Rock Outcrop Complex, very steep	None	Well Drained	Unknown
1,690.08	Water			Unknown
Hell Gate Bypass Route				
	Urban Land			Unknown
Astoria to Rainey Route				
	Urban Land			Unknown

Table 3.1-2 Surficial Materials along the Underground Transmission Cable Corridor (Reconfigured Segments)	
Length of Cable through the Surficial Material Unit (feet)	Surficial Material
Dresden to Whitehall (Route 22)	
25873.76	Till Variable texture (boulders to silt)
15526.75	Bedrock
2198.66	Lacustrine silt and clay
2109.46	water
1385.18	Lacustrine silt and clay
8462.55	Till Variable texture (boulders to silt)
Selkirk to Cementon	
2394.28	Lacustrine sand
5378.46	Lacustrine silt and clay
703.68	Recent alluvium
8674.68	Lacustrine silt and clay
9444.04	Till Variable texture (boulders to silt)
76.28	Bedrock
3747.92	Till Variable texture (boulders to silt)
4283.83	Lacustrine delta
6592.59	Lacustrine silt and clay
177.56	Till Variable texture (boulders to silt)
18503.63	Lacustrine silt and clay
3452.33	Lacustrine delta
2713.10	Lacustrine silt and clay
4727.55	Lacustrine sand
33782.89	Lacustrine silt and clay
10397.76	Till Variable texture (boulders to silt)
8632.19	Lacustrine silt and clay
3250.47	Bedrock
9868.69	Lacustrine silt and clay
5386.80	Till Variable texture (boulders to silt)
7039.04	Lacustrine silt and clay
Haverstraw Bay Bypass Route	
4417.96	Bedrock
571.95	Till Variable texture (boulders to silt)
10410.48	Lacustrine silt and clay
1012.50	Recent alluvium
4877.99	Lacustrine silt and clay
81.15	Kame deposits
1125.97	Lacustrine silt and clay
1672.05	Bedrock
5589.41	Till Variable texture (boulders to silt)
2916.22	Bedrock
Hell Gate Bypass Route	
6436.67	Till Variable texture (boulders to silt)
Astoria to Rainey Route	
15872.8	Till Variable texture (boulders to silt)

Table 3.1-3
Bedrock Geology along the Underground Transmission Cable Corridor (Reconfigured Segments)

Length of Cable through Identified Bedrock Geology (feet)	Description
Dresden to Whitehall (Route 22)	
22989.53	Hybrid rock: mangeritic to charnockitic gneiss
1546.69	Potsdam Sandstone
18584.14	Hybrid rock: mangeritic to charnockitic gneiss
2571.20	water
4883.53	Calcitic and dolomitic marble, variably siliceous
1319.56	Quartzite, quartz-biotite schist and graphitic schist
1727.22	Calcitic and dolomitic marble, variably siliceous
1934.50	Biotite-quartz-plagioclase paragneiss, amphibolite, and related migmatite
Selkirk to Cementon	
10448.69	Normanskill Shale
16159.41	Schenectady Formation
50716.03	Austin Glen Formation
1005.86	Mount Merino Formation
70897.77	Austin Glen Formation
Haverstraw Bay Bypass Route	
29.01	Balmville Limestone
2904.1	Diorite with hornblende and/or biotite
21138.75	Balmville Limestone
11357.94	Palisade Diabase sill
Hell Gate Bypass Route	
1791.45	Fordham Gneiss
1025.44	Inwood Marble
1623.50	Manhattan Formation
515.28	Inwood Marble
1034.07	Fordham Gneiss
392.62	Harrison Gneiss
Astoria to Rainey Route	
12159.7	Glacial and Alluvial Deposits
3713.1	Harrison Gneiss

Table 3-2
Surficial Materials along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Surficial Material Unit (feet)	Surficial Material
Dresden to Whitehall (Route 22)			
101.3	106.4	26860.94	Till Variable texture (boulders to silt)
106.4	109.3	15416.77	Bedrock
109.3	109.8	2359.17	Lacustrine silt and clay
109.8	110.1	1997.12	Water
110.1	110.4	1442.28	Lacustrine silt and clay
110.4	112.1	9087.55	Till Variable texture (boulders to silt)
Whitehall to Cementon (Railroad)			
112.1	112.7	2985.06	Till Variable texture (boulders to silt)
112.7	113.0	1475.76	Lacustrine silt and clay
113.0	113.2	1467.89	Recent alluvium
113.2	115.2	10512.39	Lacustrine silt and clay
115.2	115.7	2663.85	Recent alluvium
115.7	120.2	23467.99	Recent alluvium
120.2	120.7	2512.45	Lacustrine silt and clay
120.7	120.8	761.14	Bedrock
120.8	120.9	701.34	Recent alluvium
120.9	122.7	9481.53	Bedrock
122.7	123.1	2030.84	Recent alluvium
123.1	124.7	8507.07	Recent alluvium
124.7	125.1	1727.50	Lacustrine silt and clay
125.1	127.1	10737.35	Recent alluvium
127.1	127.5	2176.69	Lacustrine silt and clay
127.5	128.2	3811.99	Recent alluvium
128.2	132.5	22807.85	Lacustrine silt and clay
132.5	137.1	23885.89	Recent alluvium
137.1	137.2	541.21	Lacustrine silt and clay
137.2	137.7	2608.04	Lacustrine sand
137.7	138.1	2093.92	Recent alluvium

Table 3-2
Surficial Materials along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Surficial Material Unit (feet)	Surficial Material
138.1	140.0	10216.63	Lacustrine sand
140.0	140.0	7.38	Recent alluvium
140.0	146.5	34570.83	Wind-deposited sand
146.5	148.9	12567.99	Wind-deposited sand
148.9	150.0	5557.87	Lacustrine sand
150.0	151.0	5530.87	Till Variable texture (boulders to silt)
151.0	157.6	34539.75	Lacustrine sand
157.6	157.9	1868.61	Fluvial sand and/or gravel
157.9	157.9	35.46	Lacustrine sand
157.9	158.0	232.39	Fluvial sand and/or gravel
158.0	159.0	5571.96	Lacustrine sand
159.0	163.2	22180.85	Till Variable texture (boulders to silt)
163.2	164.5	6954.42	Outwash sand and gravel
164.5	165.4	4449.89	Bedrock
165.4	168.0	13754.24	Outwash sand and gravel
168.0	168.4	2331.60	Till Variable texture (boulders to silt)
168.4	169.6	6150.88	Outwash sand and gravel
169.6	176.3	35603.67	Recent alluvium
176.3	178.9	13379.55	Lacustrine delta
178.9	179.0	664.38	Lacustrine sand
179.0	179.0	0.75	Lacustrine sand
179.0	179.0	0.85	Lacustrine sand
179.0	182.0	16042.30	Lacustrine sand
182.0	183.6	8002.01	Lacustrine silt and clay
183.6	183.8	1270.03	Recent alluvium
183.8	183.9	685.93	Lacustrine silt and clay
183.9	183.9	67.54	Recent alluvium
183.9	184.0	113.86	Outwash sand and gravel
184.0	184.2	1284.13	Kame deposits
184.2	186.1	10118.73	Outwash sand and gravel
186.1	186.6	2397.38	Till Variable texture (boulders to silt)
186.6	188.0	7321.16	Outwash sand and gravel
188.0	188.9	4858.55	Lacustrine delta
188.9	189.5	3237.74	Kame deposits
189.5	189.5	24.71	Kame deposits
189.5	190.9	7481.66	Lacustrine silt and clay
190.9	192.4	7881.77	Lacustrine delta
192.4	192.4	1.27	Lacustrine delta
192.4	193.0	3051.71	Lacustrine delta
193.0	198.5	28994.98	Lacustrine silt and clay
198.5	199.1	3312.93	Lacustrine sand
199.1	199.6	2508.93	Lacustrine sand
199.6	200.6	5305.16	Lacustrine silt and clay
200.6	200.7	665.73	Recent alluvium
200.7	202.4	8717.75	Lacustrine silt and clay
202.4	204.2	9462.14	Till Variable texture (boulders to silt)
204.2	204.2	81.63	Bedrock
204.2	204.9	3755.90	Till Variable texture (boulders to silt)
204.9	205.7	4293.09	Lacustrine delta
205.7	206.9	6457.31	Lacustrine silt and clay
206.9	207.0	464.07	Till Variable texture (boulders to silt)
207.0	210.5	18547.28	Lacustrine silt and clay
210.5	211.2	3454.46	Lacustrine delta
211.2	211.7	2703.93	Lacustrine silt and clay
211.7	212.6	4737.51	Lacustrine sand
212.6	219.0	34022.63	Lacustrine silt and clay
219.0	221.0	10402.54	Till Variable texture (boulders to silt)
221.0	222.6	8683.47	Lacustrine silt and clay
222.6	223.3	3266.76	Bedrock
223.3	225.1	9926.24	Lacustrine silt and clay
225.1	226.2	5442.87	Till Variable texture (boulders to silt)
226.2	227.6	7667.02	Lacustrine silt and clay
227.6	228.1	2665.28	Till Variable texture (boulders to silt)
228.1	228.4	1574.51	Water

Table 3-2
Surficial Materials along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through the Surficial Material Unit (feet)	Surficial Material
Haverstraw Bay Bypass Route			
295.4	295.5	450.07	Water
295.5	296.4	4654.64	Bedrock
296.4	296.5	572.09	Till Variable texture (boulders to silt)
296.5	298.5	10479.28	Lacustrine silt and clay
298.5	298.7	986.61	Recent alluvium
298.7	299.6	4758.24	Lacustrine silt and clay
299.6	299.7	624.92	Kame deposits
299.7	300.4	3534.75	Lacustrine silt and clay
300.4	300.7	1698.02	Bedrock
300.7	301.6	5002.72	Till Variable texture (boulders to silt)
301.6	302.1	2387.11	Bedrock
302.1	302.1	267.86	Till Variable texture (boulders to silt)
302.1	302.2	448.26	Bedrock
302.2	302.4	1192.08	Till Variable texture (boulders to silt)
302.4	302.8	1963.66	Bedrock
Hell Gate Bypass Route			
330.2	331.4	5862.47	Till Variable texture (boulders to silt)
331.8	331.9	611.56	Till Variable texture (boulders to silt)
Luyster Creek Converter Station[1]			
-	-	-	Till Variable texture (boulders to silt)

Table 3-3
Bedrock Geology along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through Identified Bedrock Geology (feet)	Description
Dresden to Whitehall (Route 22)			
101.3	105.9	23975.28	Hybrid rock: mangeritic to charnockitic gneiss
105.9	106.1	1575.31	Potsdam Sandstone
106.1	109.6	18385.80	Hybrid rock: mangeritic to charnockitic gneiss
109.6	110.1	2657.28	Water
110.1	111.0	4798.75	Calcitic and dolomitic marble, variably siliceous
111.0	111.3	1472.02	Quartzite, quartz-biotite schist and graphitic schist
111.3	111.6	1648.36	Calcitic and dolomitic marble, variably siliceous
111.6	112.1	2601.23	Biotite-quartz-plagioclase paragneiss, amphibolite, and related migmatite
Whitehall to Cementon (Railroad)			
112.1	115.0	15031.20	Biotite-quartz-plagioclase paragneiss, amphibolite, and related migmatite
115.0	115.8	4103.16	Potsdam Sandstone
115.8	120.3	23775.97	Potsdam Sandstone
120.3	120.6	1648.89	Amphibolite, pyroxenic amphibolite
120.6	121.8	6778.36	Potsdam Sandstone
121.8	122.3	2588.41	Biotite-quartz-plagioclase paragneiss, amphibolite, and related migmatite
122.3	122.4	160.79	Calcitic and dolomitic marble, variably siliceous
122.4	123.1	3973.46	Biotite-quartz-plagioclase paragneiss, amphibolite, and related migmatite
123.1	123.2	206.28	Biotite-quartz-plagioclase paragneiss, amphibolite, and related migmatite
123.2	123.4	1445.51	Calcitic and dolomitic marble, variably siliceous
123.4	124.1	3608.72	Biotite-quartz-plagioclase paragneiss, amphibolite, and related migmatite
124.1	125.4	6789.54	Potsdam Sandstone
125.4	135.3	52234.28	Canajoharie Shale
135.3	135.5	1079.84	Water
135.5	136.6	5669.87	Canajoharie Shale
136.6	137.0	2144.19	Water
137.0	146.5	50514.12	Canajoharie Shale
146.5	150.4	20414.59	Canajoharie Shale
150.4	153.3	15128.02	Beekmantown Group
153.3	153.4	860.74	Dolgeville Formation

Table 3-3
Bedrock Geology along the Underground Transmission Cable Construction Zone

MP in	MP out	Length of Cable through Identified Bedrock Geology (feet)	Description
153.4	168.2	77649.98	Canajoharie Shale
168.2	168.8	3432.81	Schenectady Formation
168.8	169.0	1094.81	Canajoharie Shale
169.0	169.1	375.57	Schenectady Formation
169.1	169.1	122.51	Canajoharie Shale
169.1	169.8	3543.62	Schenectady Formation
169.8	170.8	5496.84	Canajoharie Shale
170.8	170.9	344.81	Water
170.9	171.4	2784.44	Canajoharie Shale
171.4	171.6	864.07	Water
171.6	171.7	679.55	Normanskill Shale
171.7	173.5	9349.73	Schenectady Formation
173.5	173.5	407.58	Normanskill Shale
173.5	173.9	1768.30	Schenectady Formation
173.9	179.0	27056.42	Normanskill Shale
179.0	179.0	0.75	Normanskill Shale
179.0	179.0	0.85	Normanskill Shale
179.0	182.9	20658.15	Normanskill Shale
182.9	189.5	34741.20	Schenectady Formation
189.5	192.4	15388.15	Schenectady Formation
192.4	192.4	1.27	Schenectady Formation
192.4	197.5	26925.23	Schenectady Formation
197.5	199.1	8434.39	Normanskill Shale
199.1	201.1	10478.49	Normanskill Shale
201.1	204.2	16194.29	Schenectady Formation
204.2	213.8	50985.39	Austin Glen Formation
213.8	214.0	984.19	Mount Merino Formation
214.0	228.1	74560.12	Austin Glen Formation
228.1	228.4	1603.70	Water
Haverstraw Bay Bypass Route			
295.4	295.5	127.09	Water
295.5	295.6	591.02	Balmville Limestone
295.6	295.7	833.87	Diorite with hornblende and/or biotite
295.7	296.1	2063.66	Water
296.1	296.3	955.80	Balmville Limestone
296.3	299.6	17339.67	Water
299.6	300.1	2962.34	Water
300.1	301.7	8031.23	Palisade Diabase sill
301.7	302.6	5092.68	Water
302.6	302.8	771.41	Palisade Diabase sill
302.8	302.8	251.55	Water
Hell Gate Bypass Route			
330.2	330.6	1801.57	Fordham Gneiss
330.6	330.8	1031.43	Inwood Marble
330.8	331.1	1623.95	Manhattan Formation
331.1	331.2	527.32	Inwood Marble
331.2	331.4	1040.12	Fordham Gneiss
331.8	331.9	394.91	Harrison Gneiss
331.9	331.9	133.07	Water
Luyster Creek Converter Station[1]			
-	-	-	Glacial and Alluvial

Table 4-1
Significant Natural Communities with the Potential to Occur along the
Underground Transmission Cable Construction Zone

Common Name	Description
Upland Communities	
Oak-Tulip Tree Forest	Occur on moist, well-drained, closed-canopy hardwood forests with codominating tulip tree and oak species at elevations between 10 feet and 1,360 feet. The subcanopy often includes flowering dogwood, and other understory associates include witch hazel (*Hamamelis virginiana*), sassafras (*Sassafras albidum*), and lowbush blueberry (*Vaccinium angustifolium, V. pallidum*).
Wetland Communities	
Deep Emergent Marsh	Occur on mineral soils or fine-grained organic soils with water depths ranging from 6 inches to 6.6 feet (Edinger et. al., 2002). Emergent vegetation may include for example cattails (*Typha spp.*), bur-weeds (*Sparganium spp.*), bulrushes (*Scirpus spp.*) and bluejoint grass (*Calamagrostis canadensis*) (Edinger et al., 2002).
Floodplain forest	Typically occur on mineral soils on low terraces of river floodplains and river deltas (Edinger et al., 2002). Tree species may include green ash (*Fraxinus pennsylvanicus*), cottonwood (*Populus deltoides*), cottonwood (*Populus deltoides*), red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), American elm (*Ulmus americana*, box elder (*Acer negundo*), hickories (*Carya spp.*) burr oak (*Quercus macrocarpa*) and swamp white oak (*Quercus bicolor*). Shrubs included ironwood (*Carpinus carolinianus*), dogwoods (*Cornus spp.*) and speckled alder (*Alnus incana ssp rugosa*). Sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*), goldenrods (*Soildago spp.*), ostrich fern (*Matteuccia struthiopteris*), and sedges (*Carex spp.*) are characteristic of the herbaceous layer (Edinger et al., 2002).

Table 5-1
Waterbodies Crossed along the Underground Transmission Cable

Approximate MP	Waterbody Name	Field ID[1]/Item Number[2]	Flow Status	Water Quality Classification[3,4]
Dresden to Whitehall (Route 22)				
102.1	Unnamed Tributary of Lake Champlain	830-433	TBD	D
102.3	Unnamed Tributary of Lake Champlain	830-433	TBD	D
102.4	Unnamed Tributary of Lake Champlain	830-433	TBD	D
103.8	Unnamed Tributary of Lake Champlain	830-433	TBD	D
104.2	Unnamed Tributary of Lake Champlain	830-433	TBD	D
104.8	Chubb's Brook	830-434	TBD	C(T)
105.1	Unnamed Tributary of Pease Brook	830-435	TBD	C(T)
105.3	Unnamed Tributary of Pease Brook	830-435	TBD	C(T)
106.3	Long Pond Brook	830-436	TBD	D
106.6	Unnamed Tributary of Lake Champlain	830-441	TBD	D
107.6	Unnamed Tributary of Lake Champlain	830-441	TBD	D
108.0	Unnamed Tributary of Lake Champlain	830-441	TBD	D
108.1	Unnamed Tributary of Lake Champlain	830-441	TBD	D
108.9	Unnamed Tributary of Lake Champlain	830-441	TBD	D
109.1	Unnamed Tributary of Lake Champlain	830-441	TBD	D
109.2	Unnamed Tributary of Lake Champlain	830-441	TBD	D
109.9	Lake Champlain	830-10	Perennial	B
Whitehall to Cementon (Railroad)				
113.0	Unnamed Tributary to Champlain Canal	B54-6A	Perennial	D
115.2	Unnamed Tributary to Champlain Canal	B54-3	Perennial	C
117.5	Unnamed Tributary to Champlain Canal	B53-2	Intermittent	D*
117.8	Unnamed Tributary to Champlain Canal	B52-1	Intermittent	D
119.1	Unnamed Tributary to Champlain Canal	B48-1	Intermittent	D*
119.3	Unnamed Tributary to Champlain Canal	F18	Intermittent	D*
119.3	Unnamed Tributary to Champlain Canal	F19	Intermittent	D*
121.4	Unnamed Tributary to Champlain Canal	F15	Intermittent	D*
122.4	Unnamed Tributary to Champlain Canal	F12	Perennial	D
123.0	Halfway Creek	F11	Perennial	C
125.5	Unnamed Tributary to Champlain Canal	F8-1	Perennial	D
125.8	Unnamed Tributary to Champlain Canal	F7	Intermittent	D*
127.1	Unnamed Tributary to Champlain Canal	F5	Perennial	D
128.0	Unnamed Tributary to Champlain Canal	F2-2	Perennial	C*
130.8	Unnamed Tributary to Champlain Canal	A55	Perennial	C*
131.7	Bond Creek	A1	Perennial	C
132.0	Unnamed Tributary to Champlain Canal	A2	Intermittent	D*
135.0	Hudson River (East Channel)	A11-1	Perennial	C
135.2	Hudson River (West Channel)	A11-2	Perennial	C
135.8	Unnamed Tributary to the Hudson River	A14	Intermittent	D
136.2	Unnamed Tributary to the Hudson River	A17-1	Intermittent	D*
136.5	Unnamed Tributary to the Hudson River	A19	Intermittent	D*
136.6	Unnamed Tributary to the Hudson River	A21	Intermittent	C
136.8	Unnamed Tributary to the Hudson River	A24	Intermittent	D*
137.9	North Branch Snook Kill	A29	Perennial	C(T)
138.5	Unnamed Tributary to North Branch Snook Kill	A36	Intermittent	C
139.9	Unnamed Tributary to Snook Kill	A41	Perennial	D
140.1	Snook Kill	A42	Perennial	C
142.9	Unnamed Tributary to Rice Brook	D7	Perennial	C
143.6	Unnamed Tributary to Rice Brook	D1	Perennial	C
145.1	Delegan Brook	B38	Perennial	C
149.6	Unnamed Tributary to Loughberry Lake/Spring Run	B1	Perennial	A
150.0	Unnamed Tributary to Loughberry Lake/Spring Run	B2	Intermittent	A
150.5	Unnamed Tributary to Loughberry Lake/Spring Run	B3-2	Intermittent	A
150.6	Unnamed Tributary to Loughberry Lake/Spring Run	B3-1	Intermittent	A
153.8	Geyser Brook	B8-1	Perennial	C(T)
155.5	Unnamed Tributary to Geyser Brook	B47-2	Intermittent	C*
155.5	Unnamed Tributary to Geyser Brook	B47-1	Intermittent	C*
156.2	Unnamed Tributary to Kayaderosseras Creek	B45-1	Intermittent	C
157.6	Unnamed Tributary	B10-1	Intermittent	C
157.7	Unnamed Tributary	B10-2	Intermittent	C
158.0	Kayaderosseras Creek	B10-7	Perennial	C
159.6	Unnamed Tributary to Mourning Kill	B23-3	Intermittent	C
159.7	Unnamed Tributary to Mourning Kill	B23-5	Intermittent	D*
160.4	Unnamed Tributary to Mourning Kill	B25-1	Intermittent	D*

Table 5-1
Waterbodies Crossed along the Underground Transmission Cable

160.7	Mourning Kill	B28	Perennial	C
161.2	Unnamed Tributary to Ballston Creek	B30-2	Intermittent	D*
161.7	Unnamed Tributary to Ballston Creek	B31-1	Intermittent	D*
161.8	Unnamed Tributary to Ballston Creek	B32-1	Intermittent	D*
162.2	Unnamed Tributary to Ballston Lake	B34-1	Intermittent	D*
162.6	Unnamed Tributary to Ballston Lake	B35-1	Intermittent	D*
163.1	Unnamed Tributary to Ballston Lake	C1	Perennial	C
163.7	Unnamed Tributary to Ballston Lake	C5	Intermittent	D*
163.9	Unnamed Tributary to Ballston Lake	C6	Intermittent	D*
164.1	Unnamed Tributary to Ballston Lake	C7	Intermittent	D*
164.2	Unnamed Tributary to Ballston Lake	C8-1	Intermittent	D*
164.3	Unnamed Tributary to Ballston Lake	C8-2	Intermittent	C
164.5	Unnamed Tributary to Ballston Lake	C8-3	Intermittent	D*
165.0	Unnamed Tributary to Ballston Lake	C13	Intermittent	D*
165.3	Unnamed Tributary to Ballston Lake	C18	Intermittent	C
165.7	Unnamed Tributary to Alplaus Kill	C21	Intermittent	D*
166.2	Unnamed Tributary to Alplaus Kill	C25	Intermittent	D*
166.6	Unnamed Tributary to Alplaus Kill	C26	Perennial	C(T)
167.0	Unnamed Tributary to Alplaus Kill	C28	Intermittent	C(T)
167.2	Unnamed Tributary to Alplaus Kill	C29	Intermittent	D*
167.5	Unnamed Tributary to Alplaus Kill	C31	Intermittent	D*
168.4	Unnamed Tributary to Alplaus Kill	C36	Intermittent	D*
168.6	Alplaus Kill	C33	Perennial	B
169.0	Unnamed Tributary to Alplaus Kill	C38	Intermittent	C
169.5	Unnamed Tributary to Alplaus Kill	C39	Intermittent	D*
170.1	Unnamed Tributary to Mohawk River	C42-1	Intermittent	D*
170.2	Unnamed Tributary to Mohawk River	C42-2	Intermittent	D*
171.2	Unnamed Tributary to Mohawk River	C43	Intermittent	D*
171.6	Mohawk River	C43A	Perennial	A
174.9	Unnamed Tributary	C46	Intermittent	D*
174.9	Unnamed Tributary	C47	Intermittent	D*
175.0	Unnamed Tributary	C48	Intermittent	D*
175.0	Unnamed Tributary	C49	Intermittent	D*
175.1	Unnamed Tributary	C50	Intermittent	D*
175.1	Unnamed Tributary	C51	Intermittent	D*
175.1	Unnamed Tributary	C52	Intermittent	D*
175.1	Unnamed Tributary	C53	Intermittent	D*
175.2	Unnamed Tributary	C54	Intermittent	D*
175.2	Unnamed Tributary	C55	Intermittent	D*
180.1	Unnamed Tributary to Normans Kill	E9-1	Perennial	C
180.5	Unnamed Tributary to Normans Kill	E10-1	Perennial	C*
181.0	Unnamed Tributary to Normans Kill	E12-1	Perennial	C
181.1	Unnamed Tributary to Normans Kill	E14-1	Perennial	C
181.6	Unnamed Tributary to Watervliet Reservoir	E15-1	Perennial	C
182.0	Unnamed Tributary to Watervliet Reservoir	E95	Perennial	C
182.4	Unnamed Tributary to Watervliet Reservoir	E97	Perennial	C
183.7	Normans Kill	E74	Perennial	B
186.2	Unnamed Tributary to Black Creek	E21	Intermittent	C*
187.6	Unnamed Tributary to Vly Creek	E28	Perennial	C*
188.4	Vly Creek	E30	Perennial	C(TS)
189.6	Unnamed Tributary to Vloman Kill	E32	Perennial	C
190.0	Unnamed Tributary to Vloman Kill	E82-1	Intermittent	D*
190.9	Unnamed Tributary to Vloman Kill	E38	Perennial	C
191.1	Unnamed Tributary to Vloman Kill	E39-1	Intermittent	C
192.5	Unnamed Tributary to Vloman Kill	E50-2	Intermittent	D*
192.8	Unnamed Tributary to Vloman Kill	E86	Perennial	C
193.9	Unnamed Tributary to Coeymans Creek	E48-2	Intermittent	C*
194.2	Coeyman's Creek	863-543.1	TBD	C
196.3	Coeyman's Creek	863-543.1	TBD	C
196.4	Coeyman's Creek	863-543.1	TBD	C
200.7	Coeyman's Creek	863-543	TBD	C(TS)
202.0	Tributary to Coeyman's Creek	863-544	TBD	C
203.5	Tributary to Hannacrois Creek	863-538	TBD	C
204.2	Tributary to Hannacrois Creek	863-538	TBD	C
204.6	Tributary to Hannacrois Creek	863-538	TBD	C
205.8	Hannacrois Creek	863-535	TBD	C(T)

Table 5-1
Waterbodies Crossed along the Underground Transmission Cable

206.9	Tributary to Coxsackie Creek	863-504	TBD	C
207.7	Tributary to Coxsackie Creek	863-504	TBD	C
208.1	Tributary to Coxsackie Creek	863-504	TBD	C
208.4	Tributary to Coxsackie Creek	863-504	TBD	C
210.1	Tributary to Coxsackie Creek	863-504	TBD	C
210.3	Coxsackie Creek	863-502	TBD	C
214.5	Murders Creek	863-259.1	TBD	C
216.5	Tributary to Murders Creek	863-259.4	TBD	C
220.2	Tributary to Van Hozen Kill	863-103	TBD	C
220.5	Tributary to Van Hozen Kill	863-103	TBD	C
221.4	Catskill Creek	863-94	Perennial	C
222.6	Tributary to Hudson River	863-1	TBD	C
224.9	Tributary to Hudson River	863-1	TBD	C
Haverstraw Bay Bypass Route				
296.0	Tributary of Hudson River	864-546	TBD	SC / C
297.3	Lake Tiorati Brook	864-490	Perennial	SC / C(TS)
298.6	Miniscenongo Creek	864-493	TBD	SC / C
Hell Gate Bypass Route				
331.6	East River	935-1	Perennial	I
Luyster Creek Converter Station				
No waterbodies within Study Area.				

TBD=To be determined. Field identification and flow status for portions of the project along these segments will be determined during field surveys.
[1]Field ID represents waterbodies verified during field surveys in 2010, and are denoted by an asterisk (*).
[2]Item number represents the identification of the waterbody put forth by the NYSDEC in Regulations under Chapter X – Division of Water. Available online at: http://www.dec.ny.gov/regs/2485.html
[3]NYSDEC 2007. Water Quality Classifications - NYS (NYSDEC) [Vector digital data]. Available online at: http://www.nysgis.state.ny.us/gisdata/inventories/details.cfm?DSID=1118
[4]Use classification codes are as follows:
A= source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing; and suitable for fish, shellfish, and wildlife propagation and survival.
B=primary and secondary contact recreation and fishing; and suitable for fish, shellfish, and wildlife propagation and survival.
C= fishing; suitable for fish, shellfish, and wildlife propagation and survival. Water quality should be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
D= fishing, however, natural conditions as intermittency of flow, stream bed conditions, or other water conditions may limit fish propagation. Water quality should be suitable for fish, shellfish, and wildlife survival and primary and secondary contact recreation, although other factors may limit the use for these purposes.
SC= saline surface waters; fishing; suitable for fish, shellfish, and wildlife propagation and survival. Water quality should be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
I= saline surface waters; secondary contact recreation and fishing, These waters shall be suitable for fish, shellfish, and wildlife propagation and survival.
*=waters not included in reference maps for water quality classification. These waters are assigned the same classification as the nearest downstream mapped segment (for perennial streams) or Class D (for intermittent streams).
(T)= trout waters.
(TS)= trout spawning waters.

Table 5.1-1
Waterbodies Crossed along the Underground Transmission Cable Corridor (Reconfigured Segments)

Approximate MP	Waterbody Name	Item Number[1]	Flow Status	Water Quality Classification[2,3]
Dresden to Whitehall (Route 22)				
	Unnamed Tributary of Lake Champlain	830-433	TBD	D
	Unnamed Tributary of Lake Champlain	830-433	TBD	D
	Unnamed Tributary of Lake Champlain	830-433	TBD	D
	Unnamed Tributary of Lake Champlain	830-433	TBD	D
	Unnamed Tributary of Lake Champlain	830-433	TBD	D
	Chubb's Brook	830-434	TBD	C
	Unnamed Tributary to Pease Brook	830-435	TBD	C
	Pease Brook	830-435	TBD	C
	Long Pond Brook	830-436	TBD	D
	Unnamed Tributary of Lake Champlain	830-441	TBD	D
	Unnamed Tributary of Lake Champlain	830-441	TBD	D
	Unnamed Tributary of Lake Champlain	830-441	TBD	D
	Unnamed Tributary of Lake Champlain	830-441	TBD	D
	Unnamed Tributary of Lake Champlain	830-441	TBD	D
	Unnamed Tributary of Lake Champlain	830-441	TBD	D
	Unnamed Tributary of Lake Champlain	830-441	TBD	D
	Lake Champlain-South Bay	C (Portion 5)	Perennial	A
Selkirk to Cementon				
	Coeyman's Creek	863-543	TBD	C
	Unnamed Tributary to Coeyman's Creek	863-544	TBD	C
	Unnamed Tributary to Hannacrois Creek	863-538	TBD	C
	Unnamed Tributary to Hannacrois Creek	863-538	TBD	C
	Unnamed Tributary to Hannacrois Creek	863-538	TBD	C
	Hannacrois Creek	863-535	TBD	C
	Unnamed Tributary of Coxsackie Creek	863-504	TBD	C
	Unnamed Tributary of Coxsackie Creek	863-504	TBD	C
	Unnamed Tributary of Coxsackie Creek	863-504	TBD	C
	Unnamed Tributary of Coxsackie Creek	863-504	TBD	C
	Unnamed Tributary of Coxsackie Creek	863-504	TBD	C
	Coxsackie Creek	863-502	TBD	C
	Murders Creek	863-259.1	TBD	C
	Unnamed Tributary of Murders Creek	863-259.4	TBD	C
	Unnamed Tributary of Hans Vozen Kill	863-103	TBD	C
	Catskill Creek	863-94	Perennial	C
	Unnamed Tributary of Hudson River	863-1	TBD	C
	Unnamed Tributary of Hudson River	863-1	TBD	C
Haverstraw Bay Bypass Route				
	Unnamed Tributary of Hudson River	864-546	TBD	SC/C
	Lake Tiorati Brook	864-490	Perennial	SC/C
	Miniscenongo Creek	864-493	TBD	SC/C
Hell Gate Bypass Route				
	East River	935-1	Perennial	I
Astoria to Rainey Route				
	NONE			

TBD=To be determined. Field identification and flow status for portions of the project along these segments will be determined during field surveys.
[1]Item number represents the identification of the waterbody put forth by the NYSDEC in Regulations under Chapter X – Division of Water. Available online at: http://www.dec.ny.gov/regs/2485.html
[2]NYSDEC 2007. Water Quality Classifications - NYS (NYSDEC) [Vector digital data]. Available online at: http://www.nysgis.state.ny.us/gisdata/inventories/details.cfm?DSID=1118
[3]Use classification codes are as follows:
A= source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing; and suitable for fish, shellfish, and wildlife propagation and survival.
B=primary and secondary contact recreation and fishing; and suitable for fish, shellfish, and wildlife propagation and survival.
C= fishing; suitable for fish, shellfish, and wildlife propagation and survival. Water quality should be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
D= fishing, however, natural conditions as intermittency of flow, stream bed conditions, or other water conditions may limit fish propagation. Water quality should be suitable for fish, shellfish, and wildlife survival and primary and secondary contact recreation, although other factors may limit the use for these purposes.
SC= saline surface waters; fishing; suitable for fish, shellfish, and wildlife propagation and survival. Water quality should be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
I= saline surface waters; secondary contact recreation and fishing, These waters shall be suitable for fish, shellfish, and wildlife propagation and survival.
(T)= trout waters.
(TS)= trout spawning waters.

Table 5-2
Wetlands along the Underground Transmission Cable Construction Zone

Approximate MP	Field Identification Number	NYSDEC Wetland Identification	Total Temporary Impacts within the Construction Zone	
			Forested Wetland (square feet)	Non-Forested Wetland (square feet)
Dresden to Whitehall (Route 22)				
110.4	-	-	-	6819.3[1]
111.5	-	-	-	2357.7[1]
			Dresden to Whitehall (Route 22) Subtotal:	9,177 square feet (0.2 acres)
Whitehall to Cementon (Railroad)				
113.5	B54	-	4003.9	206038.8
115.6	B55	-	-	5356.8
117.5	B53	-	-	40602.9
117.8	B52	-	-	5002.5
118.1	B51	-	-	64341.1
118.6	B50	-	-	433.0
119	B49	-	-	1140.3
118.9	B48	-	2282.9	16322.2
119.4	F19	-	155.0	-
119.7	F17	-	2244.6	36206.83
121.7	F14	-	2762.5	-
121.8	F13	-	4763.4	-
122	F12	-	13891.2	5048.7
122.8	F11	-	23480.3	-
123.2	F10	-	3336.4	-
123.5	F8	-	81326.8	42712.4
127.2	F4	-	-	52923.3
128.4	F2	-	-	46558.0
129.1	A54	-	-	177329.9
132.1	A2	-	-	76512.7
133.3	A5	-	-	5454.5
133.6	A6	-	372.6	-
135.8	A14	-	-	1288.3
135.9	A15	-	-	377.6
136	A16	-	766.2	-
136.1	A17	-	2096.8	-
136.7	A23	-	-	123.7
136.9	A24	-	-	2442.7
137.1	A26	-	1056.2	13007.8
137.8	A28	-	158.0	-
137.9	A30	-	-	1034.4
138.5	A36	-	-	406.7
139.8	A41	-	-	5081.7
141.3	A47	-	4567.5	-
141.4	A38	-	19172.0	28319.3
141.4	A48	-	404.0	-
141.4	A49	-	21767.1	1755.7
142.2	A52	-	1247.4	-
142.9	D7	-	-	8549.9
143	D6	-	962.6	-
143.1	D4	-	342.7	-
143.2	D3	-	17230.3	-
143.4	D2	-	732.0	-
145.9	B39	-	10361.2	-
149.5	B1	-	-	124.3
150.4	B3	-	565.7	31179.4
151.4	B4	-	-	15599.2
152.3	B5	-	-	190.9
152.8	B6	-	-	9927.7
154.9	D9	-	-	98941.5
155.5	B47	-	912.4	-
155.8	B45	-	14305.8	-
157	B44	-	12039.7	-
157.1	B41	-	11966.4	-
157.5	B10	-	23341.5	-
158.4	B17	-	4001.5	-
158.7	B16	-	14919.1	-
159	B18	-	-	19444.0

Table 5-2
Wetlands along the Underground Transmission Cable Construction Zone

Approximate MP	Field Identification Number	NYSDEC Wetland Identification	Total Temporary Impacts within the Construction Zone	
			Forested Wetland (square feet)	Non-Forested Wetland (square feet)
159.1	B20	-	-	281.6
159.3	B21	-	-	801.6
159.6	B23	-	-	3027.7
160.1	B25	-	12939.3	43472.6
160.7	B28	-	-	188.8
160.9	B29	-	-	1934.0
161.2	B30	-	-	15486.8
161.6	B31	-	-	19125.6
161.8	B32	-	-	11480.6
162.9	C1	-	-	36281.8
163.4	C4	-	-	6678.5
163.7	C5	-	-	1114.6
164.2	C8	-	-	28995.8
164.9	C15	-	19129.3	-
167.2	c29	-	-	2994.2
167.5	C31	-	-	10504.3
168.2	C35	-	-	8397.6
169.9	C42	-	-	34561.4
171.4	C44	-	-	282.7
174.8	C46	-	-	3316.9
175	C48	-	-	1022.7
175.3	C56	-	-	7690.1
178.4	E2	-	-	5568.7
178.8	E3	-	18082.7	16164.3
179.1	E4	-	-	26522.3
179.3	E5	-	14092.3	590.9
179.7	E7	-	-	12178.7
180	E9	-	-	65989.5
180.7	E10	-	-	9243.6
180.8	E12	-	18117.6	-
181.2	E15	-	16369.8	3722.4
182	E95	-	-	491.6
182.1	E96	-	208.5	4884.4
182.5	E97	-	-	1089.1
183.3	E80	-	-	1139.8
183.4	E79	-	6124.8	-
183.5	E77	-	-	5319.8
183.9	E75	-	1079.1	-
184.2	E17	-	721.1	13679.4
185.7	E21	-	7773.7	62951.1
186.5	E24	-	21385.2	28639.1
187.3	E26	-	-	10535.6
187.5	E28	-	3897.0	19091.7
188	E29	-	991.8	7464.3
189.2	E31	-	-	2013.4
189.8	E33	-	1822.1	1309.5
190.4	E35	-	3111.5	-
190.6	E37	-	5330.6	-
191.1	E39	-	-	13814.1
191.5	E43	-	4450.0	1003.1
194	E51	-	-	9.8
194.1	E52	-	-	972.5
194.1	E59	-	-	1565.9
194.4	E58	-	-	28325.1
197.2	E104	-	-	38523.2
198.1	E101	-	-	59460.8
216.4	-	HN-108	5635.0[1]	244348.1[1]-
219.4	-	-	-	912.0[1]
221.3	-	-	-	12013.2[1]
228.1	-	-	4525.2[1]	-

Table 5-2
Wetlands along the Underground Transmission Cable Construction Zone

Approximate MP	Field Identification Number	NYSDEC Wetland Identification	Total Temporary Impacts within the Construction Zone	
			Forested Wetland (square feet)	Non-Forested Wetland (square feet)
Whitehall to Cementon (Railroad) Subtotal:			467,322.3 square feet (10.8 acres)	1,956,956 square feet (44.9 acres)
Haverstraw Bay Bypass Route				
297.3	-	-	-	4961.3[1]
297.4	-	HS-3	-	1989.1[1]
297.6	-	-	-	1098.0[1]
Haverstraw Bay Bypass Route Subtotal:			-	8,048.4 square feet (0.2 acres)
Hell Gate Bypass Route				
None				
Luyster Creek Converter Station				
None				

[1] Estimated from existing NYSDEC or NWI freshwater wetlands mapping where field delineated data is absent.

Table 6-1
Summary of Water Quality Data

Survey/Study Name	Sample Locations (i.e., Hudson River)	Parameters Sampled	Sampling Date/Stations	Sample Depth	Description
U.S. Geological Survey	Oneida Lake, Erie Canal, Mohawk River, Lake Champlain, Champlain Canal, Hudson River	Temperature, DO, pH, Turbidity, Total Suspended Solids, Discharge, etc.	1951 – 2009 / 13 stations	0.1 – 80 ft	DO concentrations often approach saturation levels. Salinity is seasonally responsive to freshwater flow.
New York City Department of Environmental Protection	Hudson River, Harlem River, East River, Western Long Island Sound	Total suspended solids, Secchi depth, DO, salinity, temperature, Fecal coliform, chlorophyll-a	1909 – present / 7 stations	Near surface, near bottom	Coliform levels have declined and DO levels increased due to upgrades in wastewater treatment and CSO abatement
Interstate Environmental Commission (IEC)	Upper East River, Western Long Island Sound	Secchi depth, DO, temperature, salinity, chlorophyll-a, pH	1941 – present / 21 stations*	Near surface, mid depth, near bottom	Hypoxic conditions are prevalent at lower depths during summer and fall.
Connecticut Department of Environmental Protection (CTDEP) (Long Island Sound Study)	Western Long Island Sound	Total suspended solids, Secchi depth, DO, temperature, salinity, chlorophyll-a, nitrogen, phosphorus, etc.	1985 – present / 17 primary stations plus 25-30 additional stations*	Near surface, near bottom	Low DO is the most frequent impairment of aquatic life.
Lake Champlain Basin Commission	Lake Champlain	Temperature, Dissolved Oxygen, Manganese, Iron, Total Dissolved Phosphate, Arsenic	1992 – present / 15 lake stations (long-term monitoring program), 1994-1995/ 5 stations (special studies)	All depths	River inflows and seasonal patterns affect turbidity and suspended solids.
NYSDEC Rotating Intensive Basin Studies (RIBS)	Champlain Canal	TSS, Turbidity (other parameters will be available in spring 2010.)	2009	Near surface, near bottom	TSS and turbidity are generally well correlated. Limited data are available.

*Stations A4 and B3 are identical in IEC and CTDEP sampling programs.

Table 6-2
USGS Water Quality Data from Lake Champlain and Champlain Canal

U.S.G.S. Gaging Station	Sampling Dates	Temperature (˚C)		Dissolved Oxygen (mg/l)		Dissolved Oxygen Saturation (%)		pH		Turbidity (NTU)		Total Suspended Solids (mg/l)		Discharge (ft^3/s)	
		Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range
Ticonderoga (# USGS 04294408)	8/20/1969 - 6/18/1975	19.0	8.5-24	7.9	2.8-13.2	94.4	78-122	7.8	6.3-8.7	11.2	2-25	ND		ND	
Whitehall (# USGS 04294402)	8/20/1969 - 6/18/1975	19.4	7.0-25.5	8.2	4.3-13	91.1	69-125	7.7	6.2-8.4	18.7	2-80	ND		ND	
Crown Point (# USGS 04294410)	8/20/1969 - 6/18/1975	19.0	9.0-25.0	8.4	2.8-12.8	92.9	84-115	7.8	6.5-8.5	14.9	2-35	ND		ND	
Port Henry (# USGS 04294412)	8/16/1974 - 10/28/1974	11.0	5.0-20.0	ND		ND		7.6	7.6-7.6	10	5-20	ND		ND	

Source: http://ny.water.usgs/gov/
ND – No Data Available.

Table 6-3
2008 Lake Champlain Data

Station	Temperature			Chlorophyll-a			Dissolved Oxygen			Secchi Depth			Total Phosphorus		
	Average	Centigrade Maximum	Minimum	Average	µg/l Maximum	Minimum	Average	µg/l Maximum	Minimum	Average	Meters Maximum	Minimum	Average	µg/l Maximum	Minimum
02-South Lake B	19.9	25.1	6.3	6.7	14.7	1.7	ND	ND	ND	1.0	1.8	0.3	50.2	80.7	30.3
04-South Lake A	20.1	23.7	7.2	7.0	17.0	1.5	8.3	10.9	1.3	2.3	3.5	1.1	34.9	91.2	11.8
07-Port Henry Segment	18.0	23.5	7.5	5.3	13.5	1.6	10.2	12.2	7.2	3.6	4.8	2.4	19.0	34.2	11.2
09-Otter Creek Segment	18.4	22.8	8.9	4.6	7.8	2.0	ND	ND	ND	3.8	5.7	2.5	19.4	56.9	12.3
16-Shelburne Bay	19.3	23.1	10.3	3.6	5.8	1.3	ND	ND	ND	4.9	6.7	3.8	14.8	26.0	9.7
19-Main Lake	18.1	22.4	7.3	3.3	5.8	1.7	10.9	13.0	8.2	5.5	7.1	4.4	13.4	18.5	10
21-Burlington Bay	18.9	23.0	8.9	3.2	4.8	1.4	ND	ND	ND	5.5	7.8	3.4	13.7	22.9	8.4
25-Malletts Bay	19.4	23.8	8.0	3.1	4.9	1.5	8.2	12.2	1.2	4.3	6.5	3.0	12.4	22.1	8.6
33-Cumberland Bay	18.8	23.0	9.3	4.0	8.2	1.0	ND	ND	ND	4.3	7.1	2.8	14.9	18.3	10.5
34-Northeast Arm	19.0	23.2	8.0	4.3	9.6	1.3	8.3	13.6	1.8	5.3	8.0	2.9	22.0	33.9	13.4
36-Isle LaMotte (off Grand Isle)	18.7	22.8	9.6	3.3	7.4	1.2	10.4	12.6	7.4	5.1	7.0	3.5	13.4	20.7	8.8
40-St. Albans Bay	20.5	24.7	11.3	8.8	19.9	2.2	ND	ND	ND	2.8	5.2	1.6	28.1	38.6	19
46-Isle LaMotte (off Rouses Pt)	18.1	23.5	7.3	3.1	12.9	0.7	ND	ND	ND	5.6	6.8	3.0	16.0	28.7	7.8
50-Missisquoi Bay	18.9	24.2	6.5	18.1	72.6	1.1	ND	ND	ND	1.6	2.7	1.0	49.5	71.0	31.1
51-Missiquoi Bay Central	19.2	23.9	5.9	14.2	45.5	2.4	ND	ND	ND	1.7	3.5	1.0	51.5	80.7	31.1

ND = No Data.

Table 6-4
2008 Lake Champlain Data

Station	Net Phytoplankton, Total Biovolume			Total Nitrogen			Akalinity			Chloride			Dissolved Phosphorus		
	Average	um^3/l Maximum	Minimum	Average	mg/l Maximum	Minimum	Average	mg/l Maximum	Minimum	Average	mg/l Maximum	Minimum	Average	mg/l Maximum	Minimum
02-South Lake B	233,153,846	908,000,000	22,300,000	0.5	0.7	0.3	88.4	102.0	81.2	16.4	22.5	8.7	21.5	49.2	9.8
04-South Lake A	535,653,846	2,030,000,000	12,200,000	0.4	0.7	0.1	61.7	78.5	53.5	16.1	20.3	13.0	19.7	67.6	8.9
07-Port Henry Segment	181,567,000	581,000,000	6,570,000	0.4	0.5	0.4	53.1	54.5	51.8	14.6	15.4	13.8	11.1	17.3	5.0
09-Otter Creek Segment	182,288,889	692,000,000	7,700,000	0.4	0.6	0.3	52.3	55.1	49.5	14.4	15.2	12.8	10.4	20.4	5.3
16-Shelburne Bay	66,967,000	319,000,000	4,680,000	0.4	0.5	0.3	50.6	52.2	49.6	14.6	15.2	13.5	8.0	13.1	5.0
19-Main Lake	65,591,250	162,000,000	9,030,000	0.4	0.5	0.3	49.6	51.0	48.6	14.4	15.1	13.6	8.4	11.3	5.0
21-Burlington Bay	50,882,000	177,000,000	3,720,000	0.4	0.5	0.3	51.0	51.9	49.7	14.5	15.3	13.3	6.9	15.6	5.0
25-Malletts Bay	186,336,364	1,310,000,000	13,300,000	0.4	0.5	0.3	33.8	36.8	30.6	8.8	9.3	8.0	6.9	19.1	5.0
33-Cumberland Bay	88,774,556	484,000,000	861,000	0.4	0.5	0.3	46.1	48.7	44.4	14.0	14.6	13.1	7.4	9.5	5.4
34-Northeast Arm	185,141,818	577,000,000	4,060,000	0.4	0.8	0.3	48.0	49.2	47.5	9.2	9.5	8.7	13.1	28.2	5.2
36-Isle LaMotte (off Grand Isle)	115,500,000	437,000,000	14,700,000	0.4	0.5	0.3	47.4	49.1	45.8	14.0	14.9	13.0	7.5	11.3	5.2
40-St. Albans Bay	463,665,455	2,050,000,000	1,520,000	0.4	0.5	0.3	49.1	51.3	47.0	10.1	11.3	9.3	10.1	12.6	7.3
46-Isle LaMotte (off Rouses Pt)	29,806,273	78,200,000	208,000	0.4	0.5	0.2	47.3	48.5	45.0	12.5	14.1	4.3	9.4	14.1	5.8
50-Missisquoi Bay	307,620,833	1,670,000,000	1,250,000	0.6	1.0	0.4	38.6	47.7	30.9	6.2	7.7	3.6	20.2	44.6	13.9
51-Missiquoi Bay Central	336,342,500	1,890,000,000	1,560,000	0.6	1.3	0.4	42.5	47.5	35.8	6.7	8.0	5.2	22.1	40.4	10.8

Table 6-5
USGS Water Quality Data from Hudson River

U.S.G.S. Gaging Station	Sampling Dates	Temperature (˚C)		Dissolved Oxygen (mg/l)		Dissolved Oxygen Saturation (%)		pH		Turbidity (NTU)		Total Suspended Solids (mg/l)		Discharge (ft^3/s)	
		Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range
Green Island (# USGS 01358000)	6/27/1963-8/17/1994	13.1	0-27	10.5	5.1-15.7	98.2	77-131	7.3	4.2-8.3	ND		18	2-136	11,648.30	1,280-71,100
Glemount (# USGS 01359560)	4/15/1969-10/2/1992	12.1	0-29.4	10.3	4.6-15.4	91.8	53-115	7.3	6.2-8.8	ND		18.7	4-79	19,395.8	3,660-67,400
Poughkeepsie (# USGS 01372043)	4/14/1969-6/17/2000	17.4	0-27	7.9	5.4-13.6	79.4	0-104	7.4	5.9-7.9	ND		69.1	6-303	ND	
South-of-Hastings on Hudson (# USGS 01376304)	4/16/1993-3/14/1995	16.2	2.4-26.4	9.1	5.4-14.7	95.8	86-111	7.3	6.9-7.8	ND		22.1	11-41	ND	

Source: http://ny.water.usgs/gov/
ND – No Data Available.

Table 6-6
Daily Freshwater Flows (cfs) at Green Island, New York for the Period 1946-2007

Month	Minimum	25th %	Median	75th %	Maximum
JAN	1,920	7,770	10,900	17,100	142,000
FEB	1,950	8,670	11,200	15,700	91,500
MAR	2,670	11,300	17,200	27,700	152,000
APR	4,800	18,600	27,900	39,600	132,000
MAY	1,770	9,855	15,500	23,950	104,000
JUN	1,610	5,700	7,920	12,700	117,000
JUL	1,340	4,277	5,490	7,642	66,700
AUG	1,650	4,097	5,200	6,680	44,500
SEP	882	4,200	5,400	7,228	63,100
OCT	1,490	5,140	6,800	10,100	101,000
NOV	1,740	7,140	11,200	17,775	94,600
DEC	1,640	9,072	13,200	18,600	141,000

Table 6-7
Median, Mean, and Range of Water Quality Variables Sampled During September-October 2000 (top number) and 2001 (bottom number) in the Hudson River

Parameter (mg/l)	Minimum	Maximum	Median	Mean	n
Ammonia Nitrogen	0.21	0.39	0.30	0.30	2
	0.3	3.8	0.45	1.15	6
Nitrate-Nitrite	0.55	0.88	0.64	0.65	72
	0.17	0.80	0.60	0.61	81
Nitrite	0.05	0.06	0.05	0.05	6
	0.05	0.15	0.09	0.09	44
Total Kjeldahl Nitrogen (TKN)	1.0	2.9	1.5	1.6	5
	0.01	6.2	2.1	2.36	22
Total Phosphate	0.01	0.96	0.13	0.15	141
	0.01	0.19	0.12	0.10	94
Orthophosphate	0.01	0.15	0.05	0.05	144
	0.01	0.18	0.09	0.08	96
Total Suspended Solids (TSS)	5	520	19	28.8	128
	5	370	33	53.7	131

All variables were sampled near bottom.
Adapted from Llanso et al. 2003.

Table 6-8
NYCDEP Water Quality Data, Upper East River – Western Long Island Sound

Indicator	Position	Start Year	End Year	Minimum	Maximum	Average	Trend During Period
Dissolved Oxygen (mg/l)	Surface	1970	2008	3.1	6.4	4.9	Increased
	Bottom	1970	2008	2.9	4.9	4.3	Increased
Total Suspended Solids (mg/l)	Surface	1990	2008	1.2	5.0	2.7	Decreased
	Bottom	1991	2008	1.5	5.1	3.1	Decreased
Secchi Depth (ft)	N/A	1986	2008	3.3	6.1	4.9	Stable
Chlorophyll-a (µg/l)	Surface	1986	2008	4.5	25.6	11.0	Stable
Fecal Coliform (counts/100 ml)	Surface	1985	2008	17	342	95	Decreased

N/A = Not Applicable.

Table 6-9
Historical Sediment Data Along Proposed Route

Sediment Sampling Program and Date	Studies included in Program	Sample Locations	Parameters Sampled	Sample Size & Chemical Constituents	Core (C) or Surface Grab (SG)
Lake Champlain Basin Program 1991 – 1992	Burlington Harbor Surface Sample Location (1994)	Sections of Lake Champlain	Major and Trace elements, PCBs, PAHs, grain size.	Burlington Harbor (24 stations) – Trace metals and organics Burlington Bay (36 stations)	C, SG
	Malletts Bay Survey			Outer Mallets Bay (27 stations) – Trace metals	
	Cumberland Bay Survey			Cumberland Bay (5 stations) – PCBs	
NY Canal Corporation 1991-2002	N/A	Champlain Canal	PCBs, metals, grain size, PAH, Pesticides, Dioxin/Furans, TOC	23 stations – PCBs and metals	unknown
Contamination Assessment and Reduction Project (CARP) 1998 – 2001	Harbor Ambient Sediment Sampling Project (1998-1999)	Hudson River, Upper Bay, East River, Harlem River	Polyaromatic Hydrocarbons (PAHs), PCBs, pesticides, Major and Trace Elements, dioxin/furan, total organic carbon (TOC), percent solids/volatile solids, grain size.	499 analytes at 84 stations. Not all analytes sampled at all stations.	C
	Harbor Sediment Trackdown Sampling Project (2000-2001)				
New York State Historic Sediment Inventory 1988 – 2007	Division of Water	Lake Champlain/ Richelieu River, Hudson River, East River, Western Long Island Sound (LIS)	PAHs, PCBs, pesticides, Major and Trace Elements, dioxin/furan, grain size (3 stations).	713 analytes at 28 stations. Not all analytes sampled at all stations.	C, SG
	Corps of Engineers (Batelle)				
	Water Quality Network (RIBS)				
Regional Environmental Monitoring and Assessment program (R-EMAP) 1993 – 1998	1993 – 1994	New York/New Jersey Harbor, Bight Apex. Includes Hudson and Upper East Rivers and Western LIS	Polyaromatic Hydrocarbons (PAHs), pesticides, Major and Trace Elements, PCBs, dioxin/furan, grain size.	92 analytes at 56 sites.	SG
	1998			91 analytes at 28 sites.	
U.S. Geological Survey 1983 – 2005	USGS Survey	Hudson River	Major and Trace Elements, DDT and other pesticides, PCBs (not all analytes were sampled at all stations.)	Hudson River (11 stations), 218 analytes (not all analytes sampled at all stations)	SG
USEPA National Sediment Quality Survey Database 1980 – 1999	N/A	Hudson River Watershed, Hudson-Raritan Estuary, and Long Island Sound	PCBs, metals, grain size, PAH, pesticides, TOC, total inorganic carbon	Various PCB aroclors; percent sand, clay, silt, and gravel.	C, SG
USGS and CTDEP Studies in Long Island Sound	Buchholtz ten Brink and Mecray 1998	Long Island Sound	Metals, grain size	219 stations – Trace metals	C, SG
	Mecray et al. 2000			265 stations (46 new stations) – Trace metals	SG

Table 6-10
Samples Collected by NYSDEC, excluding CARP or EMAP/R-EMAP

Description of Source	County, State	Waterbody	Location	Number of Stations	Number of Samples	Sampling Equipment	Dates Sampled	Analytes Sampled
Water Quality Network (RIBS) after 12/98	Clinton, NY	Richelieu River	Richelieu R. in Rouses Point @ ~30 ft south of end of Lighthouse Marina Pier	1	1	Petit Ponar	11/1/1999	Metals, PAHs, PCBs, Pesticides, grain size, volatiles, nutrients
Water Quality Network (RIBS) after 12/98	Clinton, NY	Richelieu River	Rouses Pt., upstream of Rt. 2, approx. 30 ft. from Barcomb's Marina dock	1	1	Petit Ponar	8/10/2004	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans
Div. of Water, Bureau of Watershed Assessment and Research	Clinton, NY	Lake Champlain	Lake Champlain, Cumberland Bay Core Sample	7	87	Core Tube	3/17/1994	PCBs, Pesticides, Dioxin/Furans, volatiles, nutrients
Div. of Water, Bureau of Watershed Assessment and Research	Greene, NY	Hudson River	Hudson River near Athens	1	5	Vibrocore	10/26/1998	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans
Div. of Water, Bureau of Watershed Assessment and Research	Greene, NY	Hudson River	Hudson River, Inbocht Bay	1	5	Vibrocore	10/29/1998	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans
Div. of Water, Bureau of Watershed Assessment and Research	Putnam, NY	Hudson River	Hudson River, Foundry Cove	1	8	Vibrocore	10/30/1998	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans
Central Office, Div. Of Water	Rensselaer, NY	Hudson River	Hudson River,MP 152.6; Troy	1	1	Vibrocore	8/15/1995	Dioxin/Furans
Div. of Water, Bureau of Watershed Assessment and Research	Rensselaer, NY	Hudson River	Hudson River, Turning Basin at Rensselaer	1	7	Vibrocore	10/21/1998	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans
Div. of Water, Bureau of Watershed Assessment and Research	Rockland, NY	Hudson River	Hudson River at Iona Island	1	5	Vibrocore	10/30/1998	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans
Water Quality Network (RIBS) after 12/98	Saratoga, NY	Hudson River	Waterford at SR 4	1	1	Teflon Scoop	9/7/2007	Metals, PAHs, PCBs, Pesticides, grain size, volatiles, nutrients
Water Quality Network (RIBS)	Saratoga, NY	Hudson River	U.HUDSON R. IN SCHUYLERVILLE @ RT.29 BR.	1	1		8/15/1988	Metals, PCBs, Pesticides, grain size
Div. of Water, Bureau of Watershed Assessment and Research	Ulster, NY	Hudson River	N/A	1	10	Vibrocore	4/22/1998	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans, grain size, volatiles, nutrients
Central Office, Div. Of Water	Washington, NY	Hudson River	Hudson River,MP 188.6; Fort Edward	1	17	Vibrocore	5/8/1991 & 5/15/1991	Metals, Dioxin/furans

Table 6-10
Samples Collected by NYSDEC, excluding CARP or EMAP/R-EMAP

Description of Source	County, State	Waterbody	Location	Number of Stations	Number of Samples	Sampling Equipment	Dates Sampled	Analytes Sampled
Div. of Water, Bureau of Watershed Assessment and Research	Washington, NY	Hudson River	Hudson River at Easton	1	2	Core tube	11/20/1998	Metals, PCBs, Pesticides
Div. of Water, Bureau of Watershed Assessment and Research	Westchester, NY	Hudson River	Hudson River, Lent's Cove	1	4	Vibrocore	10/30/1998	Metals, PAHs, PCBs, Pesticides, Dioxin/Furans
IT Database, Corps of Engineers, Battelle	Bronx, NY	East River	N/A	3	4	Unknown	3/12/1990 & 5/12/1995	Metals, PAHs, PCBs, Pesticides
IT Database, Corps of Engineers, Battelle	Queens, NY	East River	N/A	1	1	Unknown	3/12/1990	Metals, PAHs, PCBs, Pesticides
IT Database, Landfill Sources	Bronx, NY	Long Island Sound	Unknown	1	3	Unknown	8/6/1992	Metals, Inorganics

N/A = Not Applicable.

Table 6-11
ER-L and ER-M Concentrations for Common Analytes

Chemical Analyte	ER-L Concentration	ER-M Concentration
Trace Elements (ppm)		
Antimony	2	25
Arsenic	8.2	70
Cadmium	1.2	9.6
Chromium	81	370
Copper	34	270
Lead	43.7	218
Mercury	0.15	0.71
Nickel	20.9	51.6
Silver	1	3.7
Zinc	150	410
DDT and Metabolites (pbb)		
DDT	1	7
DDD	2	20
DDE	2	15
Total DDT	1.58	46.1
Other Pesticides (ppb)		
Chlordane	0.5	6
Dieldrin	0.02	8
Endrin	0.02	45
Polynuclear Aromatic Hydrocarbons (ppb)		
Acenaphthene	16	500
Acenaphthylene	44	640
Anthracene	85.3	1100
Benzo(a)anthracene	261	1600
Benzo(a)pyrene	430	1600
Chrysene	384	2800
Dibenz(a,h)anthracene	63.4	260
Fluoranthene	600	5100
Fluorene	19	540
2-Methylnaphthalene	70	670
Naphthalene	160	2100
Phenanthrene	240	1500
Pyrene	665	2600
Total PAH	4022	44792

Adapted from Adams and Benyi 2003.

Table 6-12
Summary of Contaminant Concentrations and Sediment Quality Guideline Exceedences Sampled September-October 2000 and 2001

Contaminant	Minimum	Maximum	Median	Mean	Number of detects	ER-L	ER-M	# Sites ≥ ER-L	# Sites ≥ ER-M
Aluminum	2540	21000	10350	10256.9	278	-	-	-	-
Arsenic	0.81	28.2	6.8	7.2	277	8.2	70	97	0
Cadmium	0.06	11.2	0.79	1.0	126	1.2	9.6	37	1
Chromium	5.4	190	33.6	38.1	278	81	370	11	0
Copper	2.6	168	40.0	42.4	278	34	270	163	0
Lead	6	189	39.2	44.6	278	46.7	218	118	0
Mercury	0.02	2	0.28	0.38	251	0.15	0.71	197	32
Nickel	5.4	46.3	22.5	215	278	20.9	51.6	164	0
Silver	0.08	7	1.2	1.5	238	1	3.7	135	16
Zinc	28.7	455	131.5	129.2	278	150	410	100	2
Acenaphthene	52	1100	93	289.4	5	16	500	5	1
Acenaphthylene	50	830	73	139.2	13	44	640	13	1
Anthracene	62	1600	125	283.2	18	85.3	1100	13	1
Benzo(a)anthracene	45	2300	100	176.4	85	261	1600	13	1
Benzo(a)pyrene	37	2300	110	174.1	98	430	1600	6	1
Benzo(b)fluoranthene	54	1500	120	184.7	69	-	-	-	-
Benzo(k)fluoranthene	49	1000	110	163.4	72	-	-	-	-
Benzo(g,h,i)perylene	44	520	110	123.5	33	-	-	-	-
Chrysene	38	2000	110	178.7	93	384	2800	9	0
Dibenzo(a,h)anthracene	-	-	-	-	0	63.4	260	0	0
Fluoranthene	45	3000	120	218.9	133	600	5100	8	0
Fluorene	47	940	150	291.2	6	19	540	6	1
Indeno(1,2,3-cd)pyrene	45	250	89	104.8	25	-	-	-	-
2-Methylnaphthalene	-	-	-	-	0	70	670	0	0
Naphthalene	87	150	103	111.0	4	160	2100	0	0
Phenanthrene	43	4700	110	299.1	55	240	1500	17	1
Pyrene	34	5200	130	265.7	134	665	2600	11	1
Total PAH	50	27400	515	1159.5	148	4022	44792	8	0
Total PCBs	39	36000	120	726.8	71	22.7	180	71	15
Aldrin	24	24	24	24.0	1	-	-	-	-
alpha-BHC	-	-	-	-	0	-	-	-	-
beta-BHC	7	7	7	7.0	1	-	-	-	-
delta-BHC	-	-	-	-	0	-	-	-	-
gamma-BHC (Lindane)	26	26	26	26.0	1	-	-	-	-
Chlordane	-	-	-	-	0	-	-	-	-
alpha-Chlordane	-	-	-	-	0	-	-	-	-
gamma-Chlordane	-	-	-	-	0	-	-	-	-
4,4'-DDD	4	8	5	5.7	3	-	-	-	-
4,4'-DDE	-	-	-	-	0	2.2	27	0	0
4,4'-DDT	4	50	7.3	19.7	6	-	-	-	-
Total DDTs	6.7	58	8	22.6	6	1.58	46.1	6	2
Dieldrin	-	-	-	-	0	-	-	-	-
Endosulfan I	7.3	7.3	7.3	7.3	1	-	-	-	-
Endosulfan II	-	-	-	-	0	-	-	-	-
Endosulfan Sulfate	-	-	-	-	0	-	-	-	-
Endrin	-	-	-	-	0	-	-	-	-

Table 6-12
Summary of Contaminant Concentrations and Sediment Quality Guideline Exceedences Sampled September-October 2000 and 2001

Contaminant	Minimum	Maximum	Median	Mean	Number of detects	ER-L	ER-M	# Sites ≥ ER-L	# Sites ≥ ER-M
Endrin aldehyde	-	-	-	-	0	-	-	-	-
Endrin ketone	-	-	-	-	0	-	-	-	-
Heptachlor	10	10	10	10.0	1	-	-	-	-
Heptachlor epoxide	-	-	-	-	0	-	-	-	-
Methoxychlor	-	-	-	-	0	-	-	-	-
Toxaphene	-	-	-	-	0	-	-	-	-

Concentrations are in mg/kg dry wt for metals and µg/kg dry wt for organics.
Adapted from Llanso et al. 2003.

Table 7-1
Invasive Mollusk and Crustacean Species in the Lake Champlain Basin

Mollusks	
banded mystery snail	*Viviparus georgianus*
big-ear radix	*Radix auricularia*
buffalo pebblesnail	*Gillia altilis*
chinese mysterysnail	*Cipangopaludina chinensis*
European fingernail clam	*Sphaerium corneum*
European stream valvata	*Valvata piscinalis*
globe siltsnail	*Birgella subglobosa*
greater European pea clam	*Pisidium amnicum*
mud bithynia	*Bithynia tentaculata*
sharp hornsnail	*Pleurocera acuta*
woodland pondsnail	*Stagnicola catascopium*
zebra mussel	*Dreissena polymorpha*
Crustaceans	
Allegheny crayfish	*Orconectes obscurus*
big river crayfish	*Cambarus robustus*
cyclopoid copepod	*Thermocyclops crassus*
gammarid amphipod	*Gammarus fasciatus*
rusty crayfish	*Orconectes rusticus*
water flea	*Eubosmina coregoni*

Table 7-2
Summary of Benthic Macrofauna Attributes by Habitat During September-October 2000 and 2001 in the Hudson River

Habitat/Attribute	Minimum	Maximum	Median	Mean
Mesohaline (n = 56)				
Number of species	2	26	10	12
Abundance (#/m^2)	136	39,591	1,739	4,553
Biomass (g/m^2)	0.0182	21.4	1.3	2.8
Shannon diversity (log_2)	0.6	3.5	2.4	2.4
Polychaete abundance (%)	11.1	95.3	56.1	53.0
Oligochaete abundance (%)	0.0	70.7	10.4	18.4
Crustacean abundance (%)	0.0	21.4	2.5	3.9
Mollusc abundance (%)	0.0	66.7	10.2	15.4
Oligohaline (n = 83)				
Number of species	2	21	10	10
Abundance (#/m^2)	386	8,295	2,136	2,612
Biomass (g/m^2)	0.0034	85.8	1.2	8.2
Shannon diversity (log_2)	0.3	3.3	2.3	2.2
Polychaete abundance (%)	0.0	77.6	16.7	22.5
Oligochaete abundance (%)	0.0	100.0	20.7	23.9
Crustacean abundance (%)	0.0	77.1	11.8	16.7
Mollusc abundance (%)	0.0	85.0	19.4	24.9
Tidal Freshwater Mud (n = 84)				
Number of species	1	21	5	6
Abundance (#/m^2)	68	14,614	1,295	1,670
Biomass (g/m^2)	0.0023	40.8	0.3	0.8
Shannon diversity (log_2)	0.0	3.2	1.2	1.3
Polychaete abundance (%)	0.0	66.7	0.0	5.5
Oligochaete abundance (%)	0.0	100.0	76.2	68.9
Crustacean abundance (%)	0.0	72.3	1.4	6.2
Mollusc abundance (%)	0.0	66.7	4.4	10.4
Tidal Freshwater Sand (n – 55)				
Number of species	3	27	8	10
Abundance (#/m^2)	295	18,477	3,727	5,131
Biomass (g/m^2)	0.0034	160.6	0.6	4.2
Shannon diversity (log_2)	0.5	3.2	1.8	1.8
Polychaete abundance (%)	0.0	5.7	0.0	0.4
Oligochaete abundance (%)	3.4	94.1	43.6	46.8
Crustacean abundance (%)	0.0	93.7	18.6	24.9
Mollusc abundance (%)	0.0	42.3	0.3	6.0

Adapted from Llanso et al. 2003.

Table 7-3
List of Taxa Identified in the Hudson River Estuary Biocriteria Project by Habitat

Habitat	Taxon Name	Total Abundance	Num. Occurrences	Average Abundance
Mesohaline (n =56)	*Sabellaria vulgaris*	67681.6	13	1208.6
	Streblospio benediciti	35999.9	35	642.9
	Tubificoides spp.	30840.8	50	550.7
	Heteromastus filiformis	18795.4	55	335.6
	Mediomastus ambiseta	18022.7	10	321.8
	Polydora cornuta	12568.1	19	224.4
	Mulinia lateralis	7909.1	40	141.2
	Boccardiella ligerica	7386.3	7	131.9
	Marenzelleria viridis	6340.9	35	113.2
	Pygospio elegans	5409.1	1	96.6
	Leucon americanus	4500.0	23	80.4
	Carinoma tremaphoros	4090.9	41	73.1
	Neanthes succinea	3886.4	25	69.4
	Leptocheirus plumulosus	3863.6	5	69.0
	Macoma balthica	2931.8	26	52.4
	Mya arenaria	2795.4	18	49.9
	Tubificidae imm. without capilliform chaetae	2681.8	19	47.9
	Cyathura polita	2159.1	34	38.6
	Odostomia engonia	1863.6	16	33.3
	Leitoscoloplos spp.	1840.9	*22*	32.9
	Rangia cuneata	1363.6	6	24.4
	Rictaxis punctostriatus	1204.5	2	21.5
	Eteone heteropoda	977.3	14	17.5
	Acteocina canaliculata	931.8	2	16.6
	Diadumene leucolena	909.1	2	16.2
	Glycera americana	840.9	7	15.0
	Asabellides oculata	772.7	6	13.8
	Ameroculodes species complex	681.8	13	12.2
	Pectinaria gouldii	568.2	7	10.1
	Incisocalliope aestuarius	522.7	4	9.3
	Synidotea laticauda	409.1	11	7.3
	Apocorophium lacustre	340.9	5	6.1
	Melita nitida	340.9	7	6.1
	Eumida sanguinea	318.2	2	5.7
	Ampelisca abdita	272.7	4	4.9
	Tellinidae	272.7	5	4.9
	Mytilus edulis	250.0	2	4.5
	Hobsonia florida	227.3	1	4.1
	Edotea triloba	181.8	5	3.2
	Tharyx	159.1	2	2.8
	Amphiporus cf. bioculatus	136.4	5	2.4
	Nemertina	136.4	3	2.4
	Stylochus ellipticus	136.4	4	2.4
	Unciola spp.	136.4	1	2.4
	Coelotanypus spp.	113.6	3	2.0
	Spiophanes bombyx	113.6	1	2.0
	Demonax microphthalmus	68.2	1	1.2
	Lepidonotus sublevis	68.2	2	1.2
	Monocorophium spp.	68.2	2	1.2
	Nucula annulata	68.2	1	1.2
	Panopeus herbstii	68.2	2	1.2
	Ampelisca spp.	45.5	2	0.8
	Lyonsia hyalina	45.5	1	0.8
	Nassarius trivittatus	45.5	1	0.8
	Nephtyidae	45.5	2	0.8
	Oxyurostylis smithi	45.5	1	0.8
	Podarkeopsis levifuscina	45.5	2	0.8
	Spiochaetopterus costarum	45.5	2	0.8
	Unciola serrata	45.5	1	0.8
	Almyracuma proximoculi	22.7	1	0.4
	Ampharetidae	22.7	1	0.4
	Cirratulidae	22.7	1	0.4
	Dreissena polymorpha	22.7	1	0.4
	Libinia spp.	22.7	1	0.4

Table 7-3
List of Taxa Identified in the Hudson River Estuary Biocriteria Project by Habitat

Habitat	Taxon Name	Total Abundance	Num. Occurrences	Average Abundance
	Littoridinops tenuipes	22.7	1	0.4
	Loimia medusa	22.7	1	0.4
	Macoma mitchelli	22.7	1	0.4
	Mercenaria mercenaria	22.7	1	0.4
	Micrura leidyi	22.7	1	0.4
	Mytilopsis leucophaeata	22.7	1	0.4
	Phyllodoce arenae	22.7	1	0.4
	Podarke obscura	22.7	1	0.4
	Polypedilum halterale group	22.7	1	0.4
	Syllidae	22.7	1	0.4
	Turbellaria	22.7	1	0.4
	Unciola dissimilis	22.7	1	0.4
Oligohaline (n = 83)	*Rangia cuneata*	50545.3	76	609.0
	Tubificoides spp.	44931.7	77	541.3
	Leptocheirus plumulosus	30499.9	60	367.5
	Marenzelleria viridis	20931.8	79	252.2
	Hobsonia florida	13954.5	47	168.1
	Cyathura polita	9181.8	72	110.6
	Coelotanypus spp.	9113.6	62	109.8
	Heteromastus filiformis	6409.1	47	77.2
	Boccardiella ligerica	5681.8	7	68.5
	Carinoma tremaphoros	3431.8	53	41.3
	Littoridinops tenuipes	3272.7	28	39.4
	Leucon americanus	2590.9	10	31.2
	Rheotanytarsus spp.	2204.5	1	26.6
	Neanthes succinea	1159.1	20	14.0
	Streblospio benedicti	1113.6	14	13.4
	Tubificidae imm. without capilliform chaetae	1045.5	11	12.6
	Chironomidae pupae	977.3	2	11.8
	Ameroculodes species complex	909.1	19	11.0
	Anthozoa	909.1	7	11.0
	Rhithropanopeus harrisi	818.2	17	9.9
	Mya arenaria	681.8	10	8.2
	Polypedilum halterale group	681.8	2	8.2
	Edotea triloba	659.1	19	7.9
	Parachironomus hirtalatus	545.5	1	6.6
	Aulodrilus limnobius	500.0	2	6.0
	Macoma balthica	431.8	8	5.2
	Parachironomus monochromus/tenuicadatus group	363.6	2	4.4
	Apocorophium lacustre	340.9	3	4.1
	Laeonereis culveri	340.9	4	4.1
	Manayunkia aestuarina	318.2	3	3.8
	Mulinia lateralis	318.2	5	3.8
	Mytilopsis leucophaeata	250.0	5	3.0
	Dicrotendipes spp.	204.5	2	2.5
	Cricotopus spp.	204.5	1	2.5
	Cryptochironomus spp.	204.5	4	2.5
	Dreissena polymorpha	204.5	6	2.5
	Limnodrilus hoffmeisteri	136.4	3	1.6
	Synidotea laticauda	136.4	3	1.6
	Polydora cornuta	113.6	2	1.4
	Procladius spp.	90.9	4	1.1
	Gammarus spp.	68.2	3	0.8
	Thienemannimyia group	68.2	1	0.8
	Almyracuma proximoculi	45.5	1	0.5
	Nais communis	45.5	1	0.5
	Crangon septemspinosa	22.7	1	0.3
	Harnischia spp.	22.7	1	0.3
	Limnodrilus udekemianus	22.7	1	0.3
	Melita nitida	22.7	1	0.3
	Orthocladius spp.	22.7	1	0.3
	Rhithropanopeus harrisii	22.7	1	0.3

Table 7-3
List of Taxa Identified in the Hudson River Estuary Biocriteria Project by Habitat

Habitat	Taxon Name	Total Abundance	Num. Occurrences	Average Abundance
Tidal Freshwater Mud (n = 84)	Tubificidae imm. without capilliform chaetae	74954.3	82	892.3
	Limnodrilus hoffmeisteri	17045.4	69	202.9
	Gammarus spp.	9954.5	33	118.5
	Dreissena polymorpha	5113.6	10	60.9
	Marenzelleria viridis	4227.3	36	50.3
	Coelotanypus spp.	4045.4	54	48.2
	Limnodrilus udekemianus	3727.3	14	44.4
	Pisidium spp.	2590.9	28	30.8
	Littoridinops tenuipes	2363.6	17	28.1
	Musculium spp.	2363.6	21	28.1
	Sphaeridae	1886.4	13	22.5
	Rangia cuneata	1795.4	12	21.4
	Polypedilum halterale group	1204.5	16	14.3
	Cyathura polita	1045.5	22	12.4
	Tubificidae imm. with capilliform chaetae	795.5	9	9.5
	Tribelos jucundus	727.3	2	8.7
	Chiridotea almyra	659.1	13	7.8
	Tubificoides spp.	568.2	7	6.8
	Cryptochironomus spp.	500.0	15	6.0
	Tanytarsus spp.	477.3	7	5.7
	Turbellaria	477.3	12	5.7
	Ferrissia spp.	431.8	2	5.1
	Rheotanytarsus spp.	340.9	3	4.1
	Aulodrilus americanus	227.3	3	2.7
	Harnischia spp.	227.3	8	2.7
	Polypedilum scalaenum group	204.5	3	2.4
	Stitctochironomus caffrarius group	204.5	4	2.4
	Oecetis spp.	181.8	6	2.2
	Hydracarina	136.4	1	1.6
	Amnicola limosa	113.6	3	1.4
	Ilyodrilus templetoni	113.6	3	1.4
	Procladius spp.	113.6	3	1.4
	Aulodrilus limnobius	90.9	1	1.1
	Chironomus	90.9	2	1.1
	Polypedilum illinoense group	90.9	2	1.1
	Stictochironomus caffrarius group	90.9	1	1.1
	Dicrotendipes spp.	68.2	2	0.8
	Edotea triloba	68.2	3	0.8
	Enchytraeidae	68.2	2	0.8
	Paralauterborniella nigrohalterale	68.2	2	0.8
	Synidotea laticauda	68.2	1	0.8
	Ameroculodes species complex	45.5	2	0.5
	Apocorophium lacustre	45.5	1	0.5
	Aulodrilus pigueti	45.5	1	0.5
	Ceraclea spp.	45.5	1	0.5
	Chironomidae pupae	45.5	2	0.5
	Cladopelma spp.	45.5	1	0.5
	Hobsonia florida	45.5	1	0.5
	Leptocherius plumulosus	45.5	2	0.5
	Nais simplex	45.5	1	0.5
	Planorbidae	45.5	1	0.5
	Polypedilum spp.	45.5	2	0.5
	Potamothrix moldaviensis	45.5	1	0.5
	Probezzia spp.	45.5	1	0.5
	Axarus spp.	22.7	1	0.3
	Bezzia/Palpomyia group	22.7	1	0.3
	Gomphidae	22.7	1	0.3
	Hirudinea	22.7	1	0.3
	Mytilidae	22.7	1	0.3
	Nanocladius distinctus	22.7	1	0.3
	Nemertina	22.7	1	0.3
	Polydora cornuta	22.7	1	0.3
	Unionidae	22.7	1	0,3

Table 7-3
List of Taxa Identified in the Hudson River Estuary Biocriteria Project by Habitat

Habitat	Taxon Name	Total Abundance	Num. Occurrences	Average Abundance
Tidal Freshwater Sand (n = 55)	*Gammarus* spp.	90886.1	51	1652.5
	Tubificidae imm. without capilliform chaetae	78090.7	55	1419.8
	Polypedilum halterale group	34499.9	44	627.3
	Limnodrilus hoffmeisteri	15863.6	32	288.4
	Dreissena polymorpha	12522.7	16	227.7
	Cyathura polita	4886.3	34	88.8
	Ferrissia spp.	4204.5	9	76.4
	Tubificidae imm. with capilliform chaetae	3818.2	20	69.4
	Piguetiella michiganensis	3613.6	13	65.7
	Limnodrilus udekemianus	3159.1	19	57.4
	Pisidium spp.	2931.8	16	53.3
	Aulodrilus pigueti	2227.3	9	40.5
	Tanytarsus spp.	1886.4	12	34.3
	Turbellaria	1818.2	30	33.1
	Aulodrilus limnobius	1590.9	9	28.9
	Cryptochironomus spp.	1431.8	19	26.0
	Littoridinops tenuipes	1409.1	1	25.6
	Potamothrix moldaviensis	1340.9	13	24.4
	Coelotanypus spp.	1227.3	15	22.3
	Manayunkia aestuarina	1136.4	9	20.7
	Polypedilum scalaenum group	1068.2	9	19.4
	Rheotanytarsus spp.	931.8	6	16.9
	Sphaeridae	886.4	4	16.1
	Potamothrix vejdovskyi	727.3	5	13.2
	Tribelos jucundus	727.3	5	13.2
	Procladius spp.	704.5	5	12.8
	Chironomidae pupae	613.6	12	11.2
	Thienemannimyia group	590.9	3	10.7
	Chiridotea almyra	522.7	9	9.5
	Oecetis spp.	522.7	8	9.5
	Arcteonais lomondi	409.1	4	7.4
	Ilyodrilus templetoni	363.6	6	6.6
	Stylaria lacustris	363.6	4	6.6
	Musculium spp.	363.6	3	6.6
	Stictochironomus caffrarius group	340.9	1	6.2
	Harnischia spp.	318.2	8	5.8
	Hexagenia spp.	318.2	5	5.8
	Gyraulus spp.	227.3	5	4.1
	Probezzia spp.	227.3	7	4.1
	Enchytraeidae	227.3	2	4.1
	Polypedilum illinoense group	227.3	3	4.1
	Unionidae	204.5	6	3.7
	Laevapex fuscus	204.5	2	3.7
	Hydracarina	181.8	3	3.3
	Paralauterborniella nigrohalterale	181.8	5	3.3
	Rangia cuneata	159.1	1	2.9
	Aulodrilus americanus	136.4	3	2.5
	Dero spp.	136.4	1	2.5
	Polypedilum spp.	136.4	2	2.5
	Cricotopus spp.	113.6	3	2.1
	Phylocentropus spp.	113.6	2	2.1
	Tubificoides spp.	113.6	3	2.1
	Bezzia/Palpomyia group	90.9	1	1.7
	Dicrotendipes neomodestus	90.9	1	1.7
	Nemertina	90.9	4	1.7
	Physella	90.9	2	1.7
	Caecidotea	68.2	2	1.2
	Stenelmis spp.	68.2	3	1.2
	Ablabesmyia mallochi	45.5	1	0.8
	Ablabesmyia monilis	45.5	1	0.8
	Aeolosoma spp.	45.5	1	0.8
	Demicryptochironomus spp.	45.5	2	0.8
	Dero nivea	45.5	1	0.8
	Heteromastus filiformis	45.5	1	0.8

Table 7-3
List of Taxa Identified in the Hudson River Estuary Biocriteria Project by Habitat

Habitat	Taxon Name	Total Abundance	Num. Occurrences	Average Abundance
	Hydrobiidae	45.5	1	0.8
	Marenzelleria viridis	45.5	1	0.8
	Nais simplex	45.5	1	0.8
	Quistadrilus multisetosus	45.5	1	0.8
	Rhyacodrilus	45.5	1	0.8
	Thienemanniella spp.	45.5	1	0.8
	Almyracuma proximoculi	22.7	1	0.4
	Ameroculodes species complex	22.7	1	0.4
	Ceraclea spp.	22.7	1	0.4
	Ceratopogonidae	22.7	1	0.4
	Chironomus	22.7	1	0.4
	Cricotopus/Orthocladius spp.	22.7	1	0.4
	Dicrotendipes spp.	22.7	1	0.4
	Dubiraphia	22.7	1	0.4
	Heptageniidae	22.7	1	0.4
	Hirudinea	22.7	1	0.4
	Stempellina spp.	22.7	1	0.4
	Valvata sincera	22.7	1	0.4

Abundance given in no. of individuals/m^2.
Source: Llanso et al. 2003.

Table 7-4
Summary of Macroinvertebrate Sampling Across Haverstraw Bay for the Proposed Millennium Pipeline Project

Species	Number Collected
Mulinia lateralis	85
Spionidae	26
Chironomidae	10
Cyathura polita	6
Gammaridae	6
Ampharetidae	5
Oligochaeta	3
Mytilus edulis	2
Hirudinea	1
Idotea sp.	1

Table 7-5
Fish of the Lake Champlain Basin

Common Name	*Scientific Name*	Native	In LC
Alewife	*Alosa pseudoharengus*	No	Yes
Blueback Herring	*Alosa aestivalis*	No	Yes
Gizzard Shad	*Dorosoma cepedianum*	No	Yes
Atlantic Salmon	*Salmo salar*	Yes	Yes
Brown Trout	*Salmo trutta*	No	Yes
Brook Trout	*Salvelinus fontinalis*	Yes	Yes
Lake Trout	*Salvelinus namaycush*	Yes	Yes
Rainbow Trout	*Oncorhynchus mykiss*	No	Yes
Lake Whitefish	*Coregonus clupeaformis*	Yes	Yes
Cisco	*Coregonus artedi*	Yes	Yes
Rainbow Smelt	*Osmerus mordax*	Yes	Yes
American Eel	*Anguilla rostrata*	Yes	Yes
Sea Lamprey	*Petromyzon marinus*	Yes/No	Yes
American Brook Lamprey	*Lampetra appendix*	Yes	Yes
Silver Lamprey	*Ichthyomyzon unicuspis*	Yes	Yes
Lake Sturgeon	*Acipenser fulvescens*	Yes	Yes
Largemouth Bass	*Micropterus salmoides*	Yes	Yes
Rock Bass	*Ambloplites rupestris*	Yes	Yes
Smallmouth Bass	*Micropterus dolomieu*	Yes	Yes
Bluegill	*Lepomis macrochirus*	Yes	Yes
Pumpkinseed	*Lepomis gibbosus*	Yes	Yes
Black Crappie	*Pomoxis nigromaculatus*	Yes	Yes
White Crappie	*Pomoxis annularis*	No	Yes

Table 7-5
Fish of the Lake Champlain Basin

Common Name	*Scientific Name*	Native	In LC
Brown Bullhead	*Ameiurus nebulosus*	Yes	Yes
Channel Catfish	*Ictalurus punctatus*	Yes	Yes
Bowfin	*Amia calva*	Yes	Yes
Butbot	*Lota lota*	Yes	Yes
Common Carp	*Cyprinus carpio*	No	Yes
Tench	*Tinca tinca*	No	Yes
Rudd	*Scardinius erythrophthalmus*	No	Yes
Longnose Dace	*Rhinichthys cataractae*	Yes	Yes
Fallfish	*Semotilus corporalis*	Yes	Yes
Bluntnose Minnow	*Pimephales notatus*	Yes	Yes
Fathead Minnow	*Pimephales promelas*	Yes	Yes
Blackchin Shiner	*Notropis heterodon*	Yes	Yes
Bridle Shiner	*Notropis bifrenatus*	Yes	Yes
Common Shiner	*Luxilus cornutus*	Yes	Yes
Emerald Shiner	*Notropis atherinoides*	Yes	Yes
Golden Shiner	*Notemigonus crysoleucas*	Yes	Yes
Mimic Shiner	*Notropis volucellus*	Yes	Yes
Rosyface Shiner	*Notropis rubellus*	Yes	Yes
Sand Shiner	*Notropis stramineus*	Yes	Yes
Spotfin Shiner	*Cyprinella spiloptera*	Yes	Yes
Spottail Shiner	*Notropis hudsonius*	Yes	Yes
Eastern Sand Darter	*Ammocrypta pellucidum*	Yes	Yes
Tessellated Darter	*Etheostoma olmstedi*	Yes	Yes
Sauger	*Sander canadense*	Yes	Yes
Yellow Perch	*Perca flavescens*	Yes	Yes
Walleye	*Sander vitreum*	Yes	Yes
Logperch	*Percina caprodes*	Yes	Yes
Muskellunge	*Esox masquinongy*	Yes	Yes
Chain Pickerel	*Esox niger*	Yes	Yes
Northern Pike	*Esox lucius*	Yes	Yes
Quillback	*Carpiodes cyprinus*	Yes	Yes
Greater Redhorse	*Moxostoma valenciennesi*	Yes	Yes
Shorehead Redhorse	*Moxostoma macrolepidotum*	Yes	Yes
Silver Redhorse	*Moxostoma anisurum*	Yes	Yes
Longnose Sucker	*Catostomus catostomus*	Yes	Yes
White Sucker	*Catostomus commersoni*	Yes	Yes
Freshwater Drum	*Aplodinotus grunniens*	Yes	Yes
Longnose Gar	*Lepisosteus osseus*	Yes	Yes
Banded Killfish	*Fundulus diaphanus*	Yes	Yes
Mottled Sculpin	*Cottus bairdi*	Yes	Yes
Slimy Sculpin	*Cossus cognatus*	Yes	Yes
Mooneye	*Hiodon tergisus*	Yes	Yes
Central Mudminnow	*Umbra limi*	Yes	Yes
White Perch	*Morone americana*	No	Yes
Brook Silverside	*Labidesthes sicculus*	No	Yes
Trout-Perch	*Percopsis omiscomaycus*	Yes	Yes

Source: Lake Champlain Basin Commission 2006.
Note:
Native: yes = species endemic to Lake Champlain, no = nonnative.
In LC: yes = lives in Lake Champlain, no = lives in other basin waters.

Table 7-6
Fishes Reported from the Lower Hudson River Drainage from 1970 to 2003

Common Name	*Scientific Name*	Distribution		Life History
		Lower	Upper	
Sea Lamprey	*Petromyzon marinus*	X	X	Anadromous
Shortnose Sturgeon	*Acipenser brevirostrum*	X		Anadromous
Atlantic Sturgeon	*Acipenser oxyrinchus*	X		Anadromous
Longnose Gar	*Lepisosteus osseus*	X		Freshwater
American Eel	*Anguilla rostrata*	X	X	Catadromous
Conger Eel	*Conger oceanicus*	X		Marine
Blueback Herring	*Alosa aestivalis*	X		Anadromous
Hickory Shad	*Alosa mediocris*	X		Marine

Table 7-6
Fishes Reported from the Lower Hudson River Drainage from 1970 to 2003

Common Name	*Scientific Name*	Distribution		Life History
		Lower	Upper	
Alewife	*Alosa pseudoharengus*	X		Anadromous
American Shad	*Alosa sapidissima*	X		Anadromous
Atlantic Menhaden	*Brevoortia tyrannus*	X		Marine
Gizzard Shad	*Dorosoma cepedianum*	X		Freshwater
Striped Anchovy	*Anchoa hepsetus*	X		Marine
Bay Anchovy	*Anchoa mitchilli*	X		Estuarine
Goldfish	*Carassius auratus*	X		Freshwater
Grass Carp	*Ctenopharyngodon idella*	X		Freshwater
Spotfin Shiner	*Cyprinella spiloptera*	X	X	Freshwater
Common Carp	*Cyprinus carpio*	X	X	Freshwater
Cutlip Minnow	*Exoglossum maxillingua*	X	X	Freshwater
Brassy Minnow	*Hybognathus hankinsoni*	X	X	Freshwater
Eastern Silvery Minnow	*Hybognathus regius*	X	X	Freshwater
Common Shiner	*Luxilus cornutus*	X	X	Freshwater
Golden Shiner	*Notemigonus crysoleucas*	X	X	Freshwater
Comely Shiner	*Notropis amoenus*	X		Freshwater
Emerald Shiner	*Notropis atherinoides*	X	X	Freshwater
Bridle Shiner	*Notropis bifrenatus*	X	X	Freshwater
Spottail Shiner	*Notropis hudsonius*	X	X	Freshwater
Rosyface Shiner	*Notropis rubellus*	X	X	Freshwater
Bluntnose Minnow	*Pimephales notatus*	X	X	Freshwater
Fathead Minnow	*Pimephales promelas*	X	X	Freshwater
Blacknose Dace	*Rhinichthys atratulus*	X	X	Freshwater
Longnose Dace	*Rhinichthys cataractae*	X	X	Freshwater
Rudd	*Scardinius erythrophthalmus*	X		Freshwater
Creek Chub	*Semotilus atromaculatus*	X	X	Freshwater
Fallfish	*Semotilus corporalis*	X	X	Freshwater
White Sucker	*Catostomus commersonii*	X	X	Freshwater
Northern Hog Sucker	*Hypentelium nigricans*	X		Freshwater
Shorthead redhorse	*Moxostoma macrolepidotum*	X		Freshwater
White Catfish	*Ameiurus catus*	X		Freshwater
Yellow Bullhead	*Ameiurus natalis*	X	X	Freshwater
Brown Bullhead	*Ameiurus nebulosus*	X	X	Freshwater
Channel Catfish	*Ictalurus punctatus*	X		Freshwater
Redfin Pickerel	*Esox americanus*	X	X	Freshwater
Northern Pike	*Esox lucius*	X	X	Freshwater
Chain Pickerel	*Esox niger*	X	X	Freshwater
Central Mudminnow	*Umbra limi*	X		Freshwater
Eastern Mudminnow	*Umbra pygmaea*	X		Freshwater
Sockeye Salmon	*Onchorhynchus nerka*	X		Freshwater
Atlantic Salmon	*Salmo salar*	X	X	Freshwater
Brown Trout	*Salvelinus fontinalis*	X	X	Freshwater
Inshore lizardfish	*Synodus foetens*	X		Marine
Trout-Perch	*Percopsis omiscomaycus*	X	X	Freshwater
Fourbeard Rockling	*Enchelyopus cimbrius*	X		Marine
Silver Hake	*Merluccius bilinearis*	X		Marine
Atlantic Tomcod	*Microgadus tomcod*	X		Estuarine
Red Hake	*Urophycis chuss*	X		Marine
Spotted Hake	*Urophycis regia*	X		Marine
Striped Cusk-Eel	*Ophidion marginatum*	X		Marine
Atlantic Needlefish	*Strongylura marina*	X		Anadromous
Banded Killifish	*Fundulus diaphanus*	X	X	Freshwater
Mummichog	*Fundulus heteroclitus*	X		Estuarine
Spotfin Killifish	*Fundulus luciae*	X		Estuarine
Striped Killifish	*Fundulus majalis*	X		Marine
Brook Silverside	*Labidesthes sicculus*	X		Freshwater
Rough Silverside	*Membras martinica*	X		Marine
Inland Silverside	*Menidia beryllina*	X		Estuarine
Atlantic Silverside	*Menidia menidia*	X		Marine
Fourspine Stickleback	*Apeltes quadracus*	X		Estuarine
Threespine Stickleback	*Gasterosteus aculeatus*	X		Anadromous
Bluespotted Cornetfish	*Fistularia tabacaria*	X		Marine
Northern Pipefish	*Syngnathus fuscus*	X		Marine
Northern Searobin	*Prionotus carolinus*	X		Marine

Table 7-6
Fishes Reported from the Lower Hudson River Drainage from 1970 to 2003

Common Name	*Scientific Name*	Distribution		Life History
		Lower	Upper	
Striped Searobin	*Prionotus evolans*	X		Marine
Grubby	*Myoxocephalus aenaeus*	X		Marine
Atlantic Seasnail	*Liparis atlanticus*	X		Marine
White Perch	*Morone americana*	X		Estuarine
White Bass	*Morone chrysops*	X		Freshwater
Striped Bass	*Morone saxatilis*	X		Anadromous
Black Sea Bass	*Centropristis striata*	X		Marine
Rock Bass	*Ambloplites rupestris*	X	X	Freshwater
Redbreast Sunfish	*Lepomis auritus*	X	X	Freshwater
Warmouth	*Lepomis gulosus*	X		Freshwater
Pumpkinseed	*Lepomis gibbosus*	X	X	Freshwater
Bluegill	*Lepomis macrochirus*	X	X	Freshwater
Smallmouth Bass	*Micropterus dolomieu*	X	X	Freshwater
Largemouth Bass	*Micropterus salmoides*	X	X	Freshwater
White Crappie	*Pomoxis annularis*	X		Freshwater
Black Crappie	*Pomoxis nigromaculatus*	X	X	Freshwater
Tessellated Darter	*Etheostoma olmstedi*	X	X	Freshwater
Yellow Perch	*Perca flavescens*	X	X	Freshwater
Logperch	*Percina caprodes*	X	X	Freshwater
Shield Darter	*Percina peltata*	X		Freshwater
Walleye	*Sander vitreus*	X	X	Freshwater
Bluefish	*Pomatomus saltatrix*	X		Marine
Sharksucker	*Echeneis naucrates*	X		Marine
Crevalle Jack	*Caranx hippos*	X		Marine
Atlantic Moonfish	*Selene setapinnis*	X		Marine
Lookdown	*Selene vomer*	X		Marine
Scup	*Stenotomus chrysops*	X		Marine
Freshwater Drum	*Aplodinotus grunniens*	X		Freshwater
Silver Perch	*Bairdiella chrysoura*	X		Marine
Weakfish	*Cynoscion regalis*	X		Marine
Spot	*Leiostomus xanthurus*	X		Marine
Northern Kingfish	*Menticirrhus saxatilis*	X		Marine
Atlantic Croaker	*Micropogonias undulates*	X		Marine
Striped Mullet	*Mugil cephalus*	X		Marine
White Mullet	*Mugil curema*	X		Marine
Tautog	*Tautoga onitis*	X		Marine
Cunner	*Tautogolabrus adspersus*	X		Marine
Rock Gunnel	*Pholis gunnellus*	X		Marine
Northern Stargazer	*Astroscopus guttatus*	X		Marine
American Sand Lance	*Ammodytes americanus*	X		Marine
Fat Sleeper	*Dormitator maculatus*	X		Marine
Naked Goby	*Gobiosoma bosc*	X		Marine
Seaboard Goby	*Gobiosoma ginsburgi*	X		Marine
Atlantic Mackerel	*Scomber scombrus*	X		Marine
Spanish Mackerel	*Scomberomorus maculatus*	X		Marine
Butterfish	*Peprilus triacanthus*	X		Marine
Gulf Stream Flounder	*Citharichthys arctifrons*	X		Marine
Smallmouth Flounder	*Etropus microstomus*	X		Marine
Summer Flounder	*Paralichthys dentatus*	X		Marine
Fourspot Flounder	*Paralichthys oblongus*	X		Marine
Windowpane	*Scophthalmus aquosus*	X		Marine
Winter Flounder	*Pseudopleuronectes americanus*	X		Marine
Yellowtail Flounder	*Pleuronectes ferrugineus*	X		Marine
Hogchocker	*Trinectes maculatus*	X		Estuarine
Scrawled Cowfish	*Acanthostracion quadricornis*	X		Marine
Northern Puffer	*Sphoeroides maculatus*	X		Marine

Source: Daniels et al. 2005.
Note: X = Species present.

Table 7-7
Spawning Characteristics of Marine and Estuarine Fish Species in the Hudson River Estuary

Common Name	Scientific Name	Spawning Season	Spawning Zone	Egg Location in Water Column	Larvae Location
Acipenseridae (Sturgeons)					
Shortnose Sturgeon	*Acipenser brevirostrum*	Late March to April	Fresh Tidal	Demersal Adhesive	Tidal Fresh
Atlantic Sturgeon	*Acipenser oxyrhynchus*	May to July	Brackish or Fresh	Demersal Adhesive	Tidal Fresh to Brackish
Clupeidae (Herrings)					
Blueback Herring	*Alosa aestivalis*	April to June	Fresh or Brackish	Pelagic	Fresh
Hickory Shad	*Alosa mediocris*	April to June	Fresh	Demersal or Pelagic	Fresh
Alewife	*Alosa pseudoharengus*	Late March to mid-May	Fresh	Pelagic	Fresh
American Shad	*Alosa sapidissima*	April to June	Fresh and Brackish	Demersal or Pelagic	Fresh and Brackish
Atlantic Menhaden	*Brevoortia tyrannus*	Fall and Spring	Marine	Pelagic	Fresh to Marine
Atlantic Herring	*Clupea harengus*	Fall and Spring	Marine	Demersal Attached	Marine
Gizzard Shad	*Dorosoma cepedianum*	Late Spring to Early Summer	Fresh	Demersal Attached	Fresh and Brackish
Moronidae (Temperate River Basses)					
White Perch	*Morone americana*	April to May	Brackish to Fresh	Demersal	Fresh to Estuarine
Striped Bass	*Morone saxatilis*	May to June	Fresh to Brackish	Semi-demersal	Fresh to Brackish Estuarine
Petromyzontidae (Lampreys)					
Sea Lamprey	*Petromyzon marinus*	April to July	Fresh	Demersal	Fresh
Salmonidae (Trout)					
Brook Trout	*Salvelinus fontinalis*	Fall, mid-Oct to Dec	Fresh	Bottom Nesting	Fresh
Brown Trout	*Salmo trutta*	Fall to Winter	Fresh	Bottom Nesting	Fresh to Estuarine
Anguillidae (Freshwater Eels)					
American Eel	*Anguilla rostrata*	Late Winter to Early Spring	Marine, Sargasso Sea	Not Known	Marine
Other Fish Species of Interests					
Atlantic Tomcod	*Microgadus tomcod*	November to February	Brackish	Demersal Adhesive	Estuarine
Bay Anchovy	*Anchoa mitchilli*	May to September	Brackish	Pelagic	Estuarine
Atlantic Silverside	*Menidia menidia*	March to June	Estuarine to Marine	Demersal Adhesive	Estuarine
Mummichog	*Fundulus heteroclitus*	Spring to Summer	Fresh to Marine	Bottom Cluster	Fresh to Estuarine
Striped Killifish	*Fundulus majalis*	June through August	Brackish to Marine	Bottom Burried	Fresh to Estuarine
Banded Killifish	*Fundulus diaphanus*	Late Spring to Summer	Fresh to Estuarine	Cluster, Attached to Plants	Fresh to Estuarine
Spotfin Killifish	*Fundulus luciae*	Spring to Early Fall	Fresh to Marine	Bottom Cluster	Brackish to Estuarine
Sheepshead Minnow	*Cyprinodon variegates*	Spring and Summer	Fresh	Not Known	Fresh
3-spined Stickleback	*Gasterosteus aculeatus*	Spring and Summer	Fresh	Bottom Nesting	Fresh to Estuarine
4-spined Stickleback	*Apeltes quadracus*	Late Spring to Early Summer	Fresh	Bottom Nesting	Fresh to Estuarine
Winter Flounder	*Pseudopleuronectes americanus*	Winter to Spring	Estuarine to Marine	Demersal Adhesive	Estuarine to Marine

Table 7-7
Spawning Characteristics of Marine and Estuarine Fish Species in the Hudson River Estuary

Common Name	Scientific Name	Spawning Season	Spawning Zone	Egg Location in Water Column	Larvae Location
Tautog	*Tautoga onitis*	Spring to Early Summer	Estuarine to Marine	Pelagic	Estuarine
Black Sea Bass	*Centropristis striata*	May to October	Marine	Pelagic	Marine
Bluefish	*Pomatomus saltatrix*	June to August	Marine	Pelagic	Marine
Mullet	*Mugil* spp.	Fall to Winter	Estuarine to Marine	Pelagic	Estuarine

Source: Fay et al. 1983b; Abraham 1985; Collins 1985; Morton 1989; USFWS 1997; Fahay et al. 1999; Pereira et al. 1999; Steimle et al. 1999; NatureServe 2009.

Table 7-8
Fish Species Caught during the 1991-1992 and 1996 Angling Survey on the Hudson River from Hudson Falls to Tappan Zee Bridge

Common Name	*Scientific Name*
Alewife	*Alosa pseudoharengus*
American Eel	*Anguilla rostrata*
American Shad	*Alosa sapidissima*
Atlantic Silverside	*Menidia menidia*
Black Crappie	*Pomoxis nigromaculatus*
Blueback Herring	*Alosa aestivalis*
Bluefish	*Pomatomus saltatrix*
Bluegill	*Lepomis macrochirus*
Brown Bullhead	*Ameiurus nebulosus*
Brown Trout	*Salmo trutta*
Carp	*Cyprinus carpio*
Channel Catfish	*Ictalurus punctatus*
Freshwater Drum	*Aplodinotus grunniens*
Golden Shiner	*Notemigonus crysoleucas*
Largemouth Bass	*Micropterus salmoides*
Northern Pike	*Esox lucius*
Pumpkinseed	*Lepomis gibbosus*
Red Hake	*Urophycis chuss*
Rock Bass	*Ambloplites rupestris*
Smallmouth Bass	*Micropterus dolomieu*
Striped Bass	*Morone saxatilis*
White Catfish	*Ameiurus catus*
White Perch	*Morone americana*
White Sucker	*Catostomus commersoni*
Yellow Perch	*Perca flavescens*

Source: NYSDOH 1996.

Table 7-9
Maximum Temperature Change- Six Foot Burial With Six Foot Separation

Soil Type	Thermal Resistivity (K-m/W)	Peak Temperature Rise (°K) @ 0.2 m Depth	Width of Sediment Above 2°K (m) @ 0.2m Depth	Peak Temperature Rise (°K) @ 0.3 m Depth	Width of Sediment Above 2°K (m) @ 0.3m Depth	Peak Temperature Rise (°K) @ Seafloor Surface	Width of Sediment Above 2°K (m) @ Seafloor Surface
Gravel	0.55	2.26	2.36	2.89	4.5	0.9	0
Sand	0.67	2.75	3	3.52	5	1.1	0
Clay/Silt	1	4.1	6	5.25	6	1.7	0

Table 7-10
Maximum Temperature Change in Degrees Kelvin/Celsius -
Four Foot Burial with No Separation

Water	0.0038
Surface	1.0
0.2 Meter Depth	5.2
0.3 Meter Depth	6.7
0.5 Meter Depth	11.0

Table 7-11
Hudson River Essential Fish Habitat Designated Species in the Estuarine and Saline Waters of the Project Area

Common Name	*Scientific Name*	Eggs	Larvae	Juveniles	Adults	Spawning Adults
Finfish						
Atlantic sea herring	*Clupea harengus*		M,S,X	M,S,X	M,S,X	
Bluefish	*Pomatomus saltatrix*			M,S,X	M,S,X	
Atlantic Butterfish	*Peprilus triacanthus*		M,X	M,S,X	M,S,X	
Scup	*Stenotomus chrysops*	S,X	S,X	S,X	S,X	
Black Sea Bass	*Centropristus striata*			M,S,X	M,S,X	
Red Hake	*Urophycis chuss*	X	M,S,X	M,S,X	M,S,X	
Cobia	*Rachycentron canadum*	X	X	X	X	
Atlantic Mackerel	*Scomber scombrus*			S,X	S,X	
King Mackerel	*Scomberomorus cavalla*	X	X	X	X	
Spanish Mackerel	*Scomberomorus maculates*	X	X	X	X	
Summer Flounder	*Paralicthys dentatus*		F,M,S,X	M,S,X	M,S,X	
Winter Flounder	*Pseudopleuronectes americanus*	M,S,X	M,S,X	M,S,X	M,S,X	M,S
Windowpane	*Scopthalmus aquosus*	M,S,X	M,S,X	M,S,X	M,S,X	M,S
Shark and Skates						
Sand Tiger Shark	*Odontaspis taurus*		X			
Sandbar Shark	*Carcharhinus plumbeus*		X		X	
Clearnose Skate	*Raja eglanteria*			X	X	
Little Skate	*Leucoraja erinacea*			X	X	
Winter Skate	*Leucoraja ocellata*			X	X	

Source: NOAA 2009.
Note: S = seawater salinity zone (salinity > or = 25.0%)
M = mixing/brackish salinity zone (0.5% < salinity < 25.0%)
F = freshwater salinity zone (0.0% < or = salinity < or = 0.5%)
X = species designated for that particular life stage

Table 8-1
Non-ESA Cetaceans and Pinnipeds in the Nearshore Coastal Waters of Long Island

Common Name	*Scientific Name*	Federal Status	New York
Cetaceans			
Bottlenose Dolphin	*Tursiops truncates*	D	U
Common Dolphin	*Delphinus delphis*	P	N/A
Pilot Whale	*Globicephala macrorhynchus*	P	N/A
Striped Dolphin	*Stenella coeruleoalba*	P	N/A
Risso's Dolphin	*Grampus griseus*	P	N/A
White-sided Dolphin	*Lagenorhynchus acutus*	P	N/A
Pinnipeds			
Harbor Seal	*Phoca vitulina*	P	P
Gray Seal	*Halichoerus grypus*	P	N/A
Harp Seal	*Phoca groenlandica*	P	N/A
Hooded Seal	*Crystophora cristata*	P	N/A

Source: NYNHP 2008; RFMRP 2008 and 2010; CTDEP 2010; NYSDEC 2010.
Note: U = unprotected
P = protected
SC = species of concern
D = depleted
N/A = not applicable

Table 8-2
Construction Windows for Hudson River

Project Route Mile	Location	Construction Windows
230 to 234	Cementon - Malden	Aug 1 - Oct 15
234 to 239	Malden - Turkey Point	Aug 1 - Oct 15
239 to 246	Turkey Point - Kingston Point	Aug 1 - Oct 15
246 to 250	Kingston Point - Esopus Meadows	Aug 1 - Oct 15
250 to 257	Esopus Meadows - Crum Elbow	Aug 1 - Oct 15
257 to 261	Crum Elbow - Poughkeepsie	Aug 1 - Oct 15
261 to 269	Poughkeepsie - New Hamburg	Aug 1 - Oct 15
269 to 280	New Hamurg - Pollepel Island	Sep 15 - Nov 30
280 to 296	Pollepel Island - Verplanck	Sep 15 - Nov 30
296 to 305	Verplanck - Croton Point	
305 to 320	Croton point - Yonkers	Jul 1 - Oct 31
320 to 324	Yonkers - Harlem River	Jul 1 - Oct 31
	Harlem River - East River	May 15 - Nov 30

Table 9-1
Threatened and Endangered Fish Species in the Project Area

Common Name	Scientific Name	Waterbody	Federal Status	New York
Mooneye	*Hiodon tergisus*	Lake Champlain	–	T
Eastern Sand Darter	*Ammocrypta pellucidum*	Lake Champlain	–	T
Round Whitefish	*Prosopium cylindraceum*	Hudson River	–	E
Shortnose Sturgeon	*Acipenser brevirostrum*	Hudson River	E	E
Atlantic Sturgeon	*Acipenser oxyrinchus*	Hudson River	C	P

Source: FTC 2009; NYSDEC 2009.
Note: T = threatened
E = endangered
SC = species of concern
C = candidate
P = protected

Table 9-2
Preliminary List of Threatened and Endangered Non-Avian Wildlife with the Potential to Occur along the Underground Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal Status[2]	New York Status[2]	Habitat	Preliminary Assessment of Potential within the Project Area[3]
Mammals						
Allegheny woodrat	*Neotoma magister*	Rockland	-	E	Prefer large talus boulders accumulated in layers deep enough to form complex systems of passageways (NYSDEC 2010).	No
Eastern small-footed myotis	*Myotis leibii*	Albany	-	SC	Winter hibernation in caves and mines. Roost and form maternity colonies in fractures in rock ledges and talus. Foraging in deciduous forest (NYNHP 2009j).	No[4]
Indiana bat	*Myotis sodalis*	Albany	E	E	Winter hibernation in caves and mines. Summer colonies and roosts behind loose bark or in tree cavities of dead or dying trees in forested and semi-forested habitats in rural and suburban landscapes (USFWS 2004).	Yes
New England cottontail	*Sylvilagus transitionalis*	Greene, Westchester	C	SC	Shrubby areas and thickets, early successional forests with a dense shrub layer, disturbed areas and marshes (NYNHP 2009d)	No
Reptiles						
Blanding's turtle	*Emydoidea blandingii*	Saratoga	-	T	Shallow wetlands, shrub swamps, marshes, shallow ponds and vernal pools. May travel through uplands between habitat areas (NYNHP 2009k).	Yes
Bog turtle	*Glyptemys muhlenbergii*	Rockland, Westchester. Historic records from Albany County.	T	E	Open-canopy wet meadows, sedge meadows, and calcareous fens. In the Hudson River Valley, bog turtle habitats may be isolated from other wetlands or they may exist as part of larger wetland complexes. These wetlands are often fed by groundwater and the vegetation always includes various species of sedges (NYNHP 2009b)	No
Eastern box turtle	*Terrapene carolina*	Albany, Bronx, Greene, Queens, Rockland, Saratoga, Westchester, Washington	-	SC	Open deciduous forest and well-drained bottomland. May also use woodlands, fields, thickets, marshes and stream banks (CTDEP 2008). Nests are typically in bare upland areas with easy digging.	Yes
Eastern hog-nosed snake	*Heterodon platirhinos*	Albany, Queens, Rockland, Saratoga, Schenectady, Westchester	-	SC	Sandy soils, open woodlands, wetlands, sometimes rocky slopes (Sullivan and Curtis, 2001)	Yes
Eastern mud turtle	*Kinosternon subrubrum*	None. Historic records from Westchester County	-	E	Marshes, small ponds, wet ditches and fields, in fresh or brackish water. May travel away from water at times (NYSDEC 2010t)	No
Eastern wormsnake	*Carphophis amoemus*	Albany, Rockland, Westchester	-	SC	Moist/mesic forests. May be found under rocks, bark slabs, logs, leaves, or other forest litter in a variety of habitats. Also in sandy areas and pitch pine habitats (NYNHP 2009l).	Yes

Table 9-2
Preliminary List of Threatened and Endangered Non-Avian Wildlife with the Potential to Occur along the Underground Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal Status[2]	New York Status[2]	Habitat	Preliminary Assessment of Potential within the Project Area[3]
Fence lizard	*Sceloporus undulatus*	Rockland, Westchester	-	T	Hudson Highlands region, in areas are characterized by steep slopes with extensive open rocky areas that are surrounded by mixed-deciduous, oak-dominated forests (NYNHP 2009m).	No
Spiny softshell	*Apalone spinifera*	Albany (historical), Washington, Orange, Rensselaer (historical), Essex (historical), Clinton (historical)	-	SC	Large rivers, river impoundments, lakes, ponds along rivers, pools along intermittent streams, bayous, oxbows. Prefers areas with open sandy or mud banks and soft bottom. Eggs are laid in open areas in sand, gravel, or soft soil near water (NatureServe 2009).	Yes
Spotted turtle	*Clemmy guttata*	Albany, Saratoga, Schenectady, Greene, Westchester, Washington	-	SC	Marshy meadows, bogs, swamps, ditches and small ponds (NYSDEC 2010u).	Yes
Timber rattlesnake	*Crotalus horridus*	Albany, Greene, Rockland, Saratoga, Westchester, Washington	-	T	Occurs in mountainous or hilly areas, in deciduous or mixed deciduous-coniferous forests, often with rocky outcroppings, steep ledges, and rock slides (NYNHP 2009n).	Yes
Wood turtle	*Glyptemys insculpta*	Albany, Greene, Rockland, Saratoga, Schenectady, Westchester, Washington	-	SC	Live primarily along large streams, but may be found in a variety of habitats adjacent to streams, such as deciduous forest, fields, woodlands, bogs and pastures. May also be found traveling in upland areas between habitats (NatureServe 2009).	Yes
Amphibians						
Blue-spotted salamander	*Ambystoma laterale*	Albany, Saratoga, Schenectady, Greene, Washington	-	SC	Mesic temparate forests or overgrown pasture with sandy or loamy soils and adjacent lowland swamps and marshes, often belowground and under rocks or logs. Breeds in vernal pools in forested areas (NatureServe 2009).	Yes
Eastern spadefoot	*Scaphiopus holbrookii*	Albany, Queens, Rockland, Saratoga	-	SC	Pine barrens and similar habitats with dry, sandy or loose soils. Breeds in vernal pools within this habitat (NYNHP 2009o).	Yes
Jefferson salamander	*Ambystoma jeffersonianum*	Schenectady, Greene, Rockland, Washington	-	SC	Occurs in shaded or closed-canopy deciduous forest. Underground in rodent burrows under rocks, logs, and in leaf litter. Breeds in vernal pools in forested habitats (NatureServe 2009).	Yes
Longtail salamander	*Eurycea longicauda*	Greene		SC	Occurs in and along streams and seeps with a high pH and bordered by hardwoods. May be found far from water in rich forest habitat, but return to streams to breed (NYSDEC 2010).	Yes

Table 9-2
Preliminary List of Threatened and Endangered Non-Avian Wildlife with the Potential to Occur along the Underground Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal Status[2]	New York Status[2]	Habitat	Preliminary Assessment of Potential within the Project Area[3]
Marbled salamander	*Ambystoma opacum*	Rockland, Westchester	-	SC	A variety of wooded habitats near swamps and vernal pools. Also rocky bluffs, slopes and wooded dunes. Often underground or underneath logs, rocks or other cover objects. Breeds in vernal pools or the edges of permanent ponds, swamps, and slow-moving streams (NatureServe 2009).	No
Northern cricket frog	*Acris crepitans*	Rockland (historical)	-	E	Prefers shallow, slow moving, algae-filled water sources with sunny banks (NYSDEC 2010).	No
Southern leopard frog	*Rana sphenocephala*	Queens, Rockland, Westchester (not confirmed)	-	SC	Open areas, grasslands, wet meadows, shallow wetlands, grassy edges and ditches (NYNHP 2009p).	No
Tiger salamander	*Ambystoma tigrinum*	None. Historic and unconfirmed records in Albany County.	-	E	Sandy pine barren areas with temporary or permanent pools for breeding (NYSDEC 2010v).	No
Invertebrates						
American burying beetle	*Nicrophorus americanus*	Bronx	E	E	Prefers oak-hickory and bottomland forests, grasslands, and agricultural lands with well-drained soils and a well-developed detritus layer (NYSDEC 2010).	No
Checkered white	*Pontia protodice*	Queens	-	SC	Prefers open areas such as savannas, old fields, vacant lots, and power line right-of-ways (NYSDEC 2010).	No
Frosted elfin	*Callophrys irus*	Albany, Saratoga	-	T	Associated with remnant pine barrens, oak savannas, or dry oak forest, in openings, open grasslands, or shrubby areas. In the upper Hudson River Valley, populations feed on wild blue lupine (*Lupinus perennis*), which is an essential habitat component (NYNHP 2009e).	Yes
Gray petaltail	*Tachopteryx thoreyi*	Rockland	-	SC	Prefers deciduous forests with permanent seeps, usually on slopes (NYSDEC 2010).	Yes
Henry's elfin	*Callophrys henrici*	None. Historic records in Albany County.	-	SC	Records are from Albany pine bush areas. Tall shrub areas around bogs, or shrub swamps with holly (*Ilex spp.*) is potential habitat (NYNHP 2009q).	No
Inland barrens buckmoth	*Hemileuca maia maia*	Albany	-	SC	Occur in sand plain pine barrens in the Albany Pine Bush, in open areas with srcub oak. Larvae feed on oaks, particularly scrub oak and dwarf-chestnut oak (NYNHP 2009r).	Yes
Karner blue	*Plebejus melissa samuelis*	Albany, Saratoga, Schenectady	E	E	Extensive pine barrens, oak savannas or openings in oak woodlands, and unnatural openings such as airports and right-of-ways. Restricted to dry sandy areas with open woods and clearings that contain wild blue lupine (NYNHP 2009c).	Yes

Table 9-2
Preliminary List of Threatened and Endangered Non-Avian Wildlife with the Potential to Occur along the Underground Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal Status[2]	New York Status[2]	Habitat	Preliminary Assessment of Potential within the Project Area[3]
Little bluet	*Enallagma minusculum*	Queens	-	T	Found in acidic, sandy ponds with floating vegetation.	No
Mottled duskywing	*Erynnis martialis*	Albany, Saratoga	-	SC	Occurrences are in the Albany Pine Bush. May have once used various dry habitats with brush and scrub or relatively open woodlands with New Jersey Tea (*Ceanothus americanus*), the larval host plan (NYNHP 2009s).	Yes
Northeastern beach tiger beetle	*Cicindela dorsalis dorsalis*	Queens	T	T	Occurs in wide, undisturbed, dynamic, fine sand beaches with limited use and disturbance by humans (NYSDEC 2010).	No
Persius duskywing	*Erynnis persius persius*	Saratoga. Historic records in Albany County.	-	E	Mostly in pine barrens or savannas, but sometimes boggy places. Food plant is wild blue lupine or horseflyweed (*Baptisia tinctoria*) (NatureServe 2009).	Yes
Tawny crescent	*Phyciodes batesii batesii*	None. Historic records in Albany.	-	SC	Potential habitats includes savannahs, brushy openings, openings in wooded areas, old clearings, roadsides, open fields, rocky riparian slopes, oak savannahs and dry upland pastures. (NatureServe 2009).	No

[1]NYDEC 2009. New York Nature Explorer [web site] at: http://www.dec.ny.gov/natureexplorer/app/
[2] E=Endangered, T=Threatened, C=Candidate, SC=Special Concern.
[3] These species may be present in the Project area if more detailed assessment concludes that the specific habitats they require are within the vicinity of the Project. Consultations with resource agencies in New York State have been initiated and are ongoing. CHPEI anticipates that further information from consultations with NYNHP, NYSDEC and USFWS will further refine this assessment of species potentially present within the Project area.
[4]No suitable winter or summer roost habitat along the transmission cable construction zone. Bats may forage over the Project area, but are unlikely to be affected by any Project activities.

Table 9-3
Preliminary List of Threatened and Endangered Avifauna with the Potential to Occur along the Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal[2]	New York[2]	Habitat	Preliminary Assessment of Potential within the Project Area[3]
American bittern	*Botaurus lentiginosus*	Albany, Rockland, Saratoga, Washington	-	SC	Freshwater and sometimes brackish marshes, as well as marshy edges of lakes, ponds and impoundments (NatureServe 2009).	Yes
Bald eagle	*Haliaeetus leucocephalus*	Albany, Saratoga, Westchester, Washington, Columbia, Dutchess, Greene, Orange, Putnam, Rensselaer, Rockland, Ulster, Essex, Clinton	-	T	Live and nest near large bodies of water, such as bays, rivers and lakes (NYNHP, 2009q).	Yes
Bicknell's thrush	*Catharus bicknelli*	Greene	-	SC	Restricted to montane forests of balsam fir. Often associated with recently disturbed areas characterized by standing dead conifers and dense regrowth of balsam fir (NatureServe 2009).	
Black skimmer	*Rhynchops niger*	Nassau, Queens	-	SC	Nest on open sandy beaches, barrier beaches and dredge spoil islands (often with other gulls, terns and shorebirds) or open salt marsh areas. Forage in shallow and tidal waters of bays, inlets, marshes, estuaries, and salt marsh pool (NYNHP 2009t).	Yes
Black tern	*Childonias niger*	Clinton	-	E	Northern New York only in freshwater marshes with a mixture of emergent vegetation and open water (NYNHP 2009u).	No
Cerulean warbler	*Dendroica cerulea*	Greene, Westchester, Washington	-	SC	Breeds in broad-leaved deciduous forests, particularly closed canopy old growth forests, near streams, lakes or rivers (NYSDEC 2010w).	Yes
Common loon	*Gavia immer*	Saratoga, Westchester, Washington, Nassau, Essex, Clinton	-	SC	Breed on lakes and reservoirs. Winter along the coast at bays, inlets, and estuaries, sometimes on lakes and rivers (NYNHP 2009v).	Yes
Common nighthawk	*Chordeiles minor*	Bronx, Rockland, Saratoga, Queens, Westchester, Washington	-	SC	Nests are on bare substrate such as sand, dirt, gravel, or bare rock, often roofs of buildings in urban areas. Occurs in open habitats such as coastal dunes, beaches, forest clearings, and gravel roof tops (NYSDEC 2010x).	Yes
Common tern	*Sterna hirundo*	Westchester, Nassau, Queens, Essex	-	T	Beaches, grassy uplands and rocky inland shores. In New York, breed coastally or on large inland lakes (NYSDEC 2010y).	Yes
Cooper's hawk	*Accipeter cooperii*	Albany, Bronx, Greene, Rockland, Saratoga, Schenectady, Westchester, Washington	-	SC	Broadleaf hardwood or coniferous mature forests, forest edges, and open woodlands (NatureServe 2009).	Yes
Golden-winged warbler	*Vermivora chrysoptera*	Albany, Greene, Rockland, Saratoga, Westchester, Washington	-	SC	Early successional fields with mixed shrubby and open areas, especially abandoned farmlands and scrub-shrub wetlands (NYSDEC 2010z).	Yes
Grasshopper Sparrow	*Ammodramus savannarum*	Albany, Greene, Saratoga, Westchester, Washington	-	SC	Upland meadows, grasslands, pastures, hayfields and croplands with dense grasses (NYSDEC 2010aa)	Yes
Henslow's Sparrow	*Ammodramus henslowii*	Albany, Saratoga, Schenectady, Washington	-	T	Grassy fields with tall, dense vegetation and little or no woody vegetation (NYNHP 2009g).	Yes

Table 9-3
Preliminary List of Threatened and Endangered Avifauna with the Potential to Occur along the Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal[2]	New York[2]	Habitat	Preliminary Assessment of Potential within the Project Area[3]
Horned lark	*Eremophila alpestris*	Saratoga, Schenectady, Washington	-	SC	Nests in row crops, hayfields and grasslands in lowland areas (NYSDEC 2010bb).	Yes
King Rail	*Rallus elegans*	Albany, Westchester	-	T	Breed in fresh and brackish marshes with emergent vegetation. Winter primarily in coastal salt marsh (NYNHP 2009w).	Yes
Least bittern	*Ixobrychus exilis*	Albany, Greene, Queens, Rockland, Saratoga, Schenectady, Westchester, Washington	-	T	Shallow or deep emergent marshes, and freshwater or brackish tidal marshes, particularly with cattails or bulrush with bur-reed, sedges, or common reed (NYNHP 2009x).	Yes
Least tern	*Sterna antillarum*	Queens	-	T	Open sandy or gravelly beaches, dredge spoil, shoreline areas, and sometimes inland on broad river valley sandbars (NYSDEC 2010cc).	Yes
Northern goshawk	*Accipiter gentilis*	Albany, Greene, Rockland, Saratoga, Westchester, Washington	-	SC	Mature forests including coniferous, deciduous or mixed forests (NatureServe 2009).	Yes
Northern harrier	*Circus cyaneus*	Albany, Bronx, Queens, Saratoga, Schenectady, Westchester, Washington	-	T	Nest on the ground in open grasslands, shrublands, and marshes (NYNHP 2009y).	Yes
Osprey	*Pandion haliaetus*	Albany, Greene, Saratoga, Westchester, Washington, Columbia, Dutchess, Nassau, Putnam, Queens, Rensselaer, Rockland, Ulster, Essex, Clinton	-	SC	Nests along coastlines, lakes and rivers (NYSDEC 2010dd).	Yes
Peregrine falcon	*Flaco peregrinus*	Albany, Bronx, Greene, New York, Queens, Rockland, Saratoga, Schenectady, Westchester, Washington	-	E	Nest on ledges, cliffs, or artificial structures such as tall buildings and bridges in urban areas (NYNHP 2009z).	No[3]
Pied-billed grebe	*Podilymbus podiceps*	Albany, Greene, Queens, Rockland, Saratoga, Schenectady, Westchester, Washington	-	T	Quiet marshes, emergent vegetation along pond edges, shallow lakes, or marshy bays and or along slow-moving streams. Frequently associated with beaver impoundments (NYNHP 2009aa).	Yes
Piping plover	*Charadrius melodus*	Bronx, Nassau, Queens	T	E	Breed on dry sandy beaches, near dunes with little vegetation, or in areas that have been filled with dredged sand (NYSDEC 2010s).	Yes
Red-headed woodpecker	*Melanerpes erythrocephalus*	Greene, Westchester	-	SC	River bottoms, wooded swamps, open grasslands and agricultural areas with scattered dead trees and snags that provide nesting sites (NYSDEC 2010ee).	Yes
Red-shouldered hawk	*Buteo lineatus*	Albany, Greene, Rockland, Saratoga, Schenectady, Westchester, Washington	-	SC	Riparian forets, most woodlands, forested swamps and open pine woodlands (NYSDEC 2010ff)	Yes
Roseate tern	*Sterna dougallii*	Nassau, Queens	E	E	Breeds on a few colonies on Long Island. Nesting habitat includes salt marsh islands and beaches with sparse vegetation (NYSDEC 2010r).	Yes*

Table 9-3
Preliminary List of Threatened and Endangered Avifauna with the Potential to Occur along the Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal[2]	New York[2]	Habitat	Preliminary Assessment of Potential within the Project Area[3]
Seaside sparrow	*Ammodramus maritimus*	Bronx, Queens, Westchester	-	SC	Coastal tidal marshes (NYNHP 2009bb).	No
Sedge wren	*Cistothrous platensis*	Albany, Westchester, Washington	-	T	Nest in tall grass or sedge clumps in wet meadows, grass and sedge bogs, or coastal marshes (NYNHP 2009cc), with scattered small shrubs.	Yes
Sharp-shinned hawk	*Accipiter striatus*	Albany, Greene, Rockland, Saratoga, Schenectady, Westchester, Washington	-	SC	Nests in coniferous, mixed, or deciduous forests and open woodlands (NatureServe 2009). Can also occur in suburban areas.	Yes
Short-eared owl	*Asio flammeus*	Saratoga, Westchester, Washington, Greene, Nassau, Orange, Queens, Ulster, Essex, Clinton	-	E	Open habitats, including grasslands, agricultural areas, freshwater marshes, and salt marshes (NYNHP 2009dd).	Yes
Upland sandpiper	*Bartramia longicauda*	Albany, Greene, Queens, Saratoga, Washington	-	T	Nests in grasslands, arifields, pastures and grassy fields (NYNHP 2009ee).	Yes
Vesper sparrow	*Pooecetes gramineus*	Albany, Saratoga	-	SC	Grasslands, native prairie, pastures and haylands; will also use disturbed habitats such as reclaimed mines, overgrazed pasture, and row crops (NYSDEC 2010gg).	Yes
Whip-poor-will	*Caprimulgus vociferus*	Albany, Greene, Rockland, Washington	-	SC	Breeds in dry, deciduous or mixed forests an open understory and near open areas for foraging. In upstate New York, associated with oak-hickory forests (NYSDEC 2010hh).	Yes
Yellow-breasted chat	*Icteria virens*	Westchester	-	SC	Dense thickets and brush along the edges of deciduous and coniferous forests (NYSDEC 2010ii).	Yes

[1]NYDEC 2009. New York Nature Explorer [web site] at: http://www.dec.ny.gov/natureexplorer/app/
[2] E=Endangered, T=Threatened, C=Candidate, SC=Special Concern.
[3] These species may be present in the Project area if more detailed assessment concludes that the specific habitats they require are within the vicinity of the Project. Consultations with resource agencies in New York State have been initiated and are ongoing. CHPEI anticipates that further information from consultations with NYNHP, NYSDEC and USFWS will further refine this assessment of species potentially present within the Project area.

Table 9-4
Preliminary List of Threatened and Endangered Plants with the Potential to Occur along the Underground Transmission Cable Construction Zone

Common Name	*Scientific Name*	Counties with NYDEC Occurrence Records[1]	Federal Status[2]	New York Status[2]	Habitat	Preliminary assessment of potential within the Project area[3]
Blunt-lobe Grape Fern	*Botrychium oneidense*	Albany, Saratoga (historical), Westchester (historical)	-	E	Found in organic or acidic moist soils and sandy soils in mixed deciduous hardwood forests, including the lower slopes of maple forests, secondary forests, wet woods along stream corridors, creek gorges and swamps (NYNHP 2009ff).	Yes
Button-bush dodder	*Cuscuta cephalanthi*	Washington (historical)	-	E	Wetlands; hosts include willows, asters, goldenrods, buttonbush, horsetails, mints, & water-willow (NYNHP 2009gg).	Yes
Carey's Smartweed	*Persicaria careyi*	Albany, Schenectady	-	T	A variety of wet or occasionally wet habitats, which may include coastal plain pond shores, roadside and powerline right-of-ways, talus slopes, low thickets, swamps, recent burns, clearings and cultivated ground May be in peaty or mucky soils, some sandy, and some a mixture (NYNHP 2009hh)	Yes
Cut-leaved Evening Primrose	*Oenothera laciniata*	Albany (historical)	-	E	Dry or sandy soils in sunny places (Connecticut Botanical Society, 2005).	Yes
Davis' Sedge	*Carex davisii*	Albany, Greene, Saratoga (unconfirmed), Westchester (historical)	-	T	Mesic limestone, rich bottomland, floodplain forests, wet meadows and open gravel bars of large rivers. A number of populations occur adjacent to the Hudson River. Plants can occur in disturbed areas (NYNHP 2009ii).	Yes
Downy Lettuce	*Lactuca hirsuta*	Albany (unconfirmed), Schenectady (unconfirmed)	-	E	Open woods, clearings, thickets, rights-of-way, and ridgetops (Pennsylvania Natural Heritage Program 2010).	Yes
Dune Sandspur	*Cenchrus tribuloides*	Albany (historical)	-	T	Moist, sandy dunes (Utah State University, 2010).	Yes
Erect Knotweed	*Polygonum erectum*	Schenectady (historical), Albany (historical), Saratoga (historical), Westchester (historical)	-	E	Sand dunes (UWPlants 2010a).	Yes
Estuary Beggar-ticks	*Bidens hyperborea var. hyperborea*	Albany	-	E	Only known from freshwater tidal mud flats and marshes (NYNHP 2009jj).	Yes
Giant Pine-drops	*Pterospora andromedea*	Washington (historical), Albany (historical), Schenectady (unconfirmed), Westchester (unconfirmed)	-	E	Dry or mixed coniferous forests (NatureServe 2009; UWPlants 2010b)	Yes
Glaucous Sedge	*Carex glaucodea*	Albany (historical)	-	E	Wet to dry meic deciduous forests and old fields, edges of seasonal swamps and open, seasonally wet depressions. Plants can often be found in roads and deer or human paths through forests (NYNHP 2009kk).	Yes

Table 9-4
Preliminary List of Threatened and Endangered Plants with the Potential to Occur along the Underground Transmission Cable Construction Zone

Common Name	*Scientific Name*	Counties with NYDEC Occurrence Records[1]	Federal Status[2]	New York Status[2]	Habitat	Preliminary assessment of potential within the Project area[3]
Ground-cherry	*Physalis virginiana var. virginiana*	Albany	-	E	In the Hudson Valley, it is restricted to the edges of freshwater intertidal mudflats, sandy or rocky shorelines of tidal creeks and other waterways, edges of freshwater tidal marshes, and gravel shores along the freshwater tidal portions of the Hudson River (NatureServe 2009).	Yes
Heartleaf Plantain	*Plantago cordata*	Albany, Greene	-	T	Habitat includes shallow streams and along floodplains, gravelly or rocky beds of shallow, clear streams or springs and their adjacent floodplains. In New York, occurs along the banks of the Hudson River (NYNHP 2009ll).	Yes
Hooker's Orchid	*Plantanthera hookeri*	Saratoga (historical), Albany (historical), Westchester (historical)	-	E	Habitat is dry or moist woodlands and forest, especially with open understories or successional forest dominated by poplar and pine. May be in deciduous, coniferous or mixed woods, thickets, and borders (NYNHP 2010mm).	Yes
Hudson River Water-nymph	*Najas guadalupensis ssp. muenscheri*	Albany, Greene, Saratoga (historical), Westchester (historical)	-	E	Fresh shallow water or pools of tidal mud flats of the Hudson River; occurs in mucky or gravel and rock soils resh tidal margins of rivers (NYNHP 2009nn).	Yes
Large Twayblade	*Liparis liliifolia*	Albany, Saratoga (historical), Schenectady (historical), Westchester	-	E	May occur in upland or wetland habitats, such as rich woods, red maple swamps with sphagnum hummocks, limestone-influenced soil and wooded talus slopes, secondary growth thickets, clearings and along railroad grades at the edge of swamps (NYNHP 2009oo).	Yes
Long's Bittercress	*Cardamine longii*	Greene	-	T	Interidal areas within tidal estuaries and backwater areas. Often in shaded areas of tidal swamps, mudflats, and muddy banks along tidal creeks (NYNHP 2009).	Yes
Purple Everlasting	*Gamochaeta purpurea*	Albany (historical), Westchester	-	E	Open, usually disturbed, commonly sandy habitats, roadsides, fields, woodland clearings and edges (Flora of North America 2010).	Yes
Puttyroot	*Aplectrum hyemale*	Albany (historical), Saratoga (unconfirmed), Westchester (historical)	-	E	Rich woods, near limestone outcrops or in calcareous talus in mesic to damp soils. Typically in deciduous or mixed upland to swampy forests (NYNHP 2009pp).	Yes

Table 9-4
Preliminary List of Threatened and Endangered Plants with the Potential to Occur along the Underground Transmission Cable Construction Zone

Common Name	*Scientific Name*	Counties with NYDEC Occurrence Records[1]	Federal Status[2]	New York Status[2]	Habitat	Preliminary assessment of potential within the Project area[3]
Side-oats Grama	*Bouteloua curipendula var. curtipendula*	Schenectady, Albany, Westchester (unconfirmed)	-	E	Usually associated with dry limestone-derived soils and with natural or artificial disturbed areas. It prefers open habitats and may be found on riverside bluffs, shale cliffs and barrens, cedar glades, limestone pavements, abandoned sandpits, pastures, railroads, and powerlines (NYNHP 2010qq).	Yes
Small Whorled Pogonia	*Isotria medeoloides*	Washington (historical)	T	E	Semi-open second-growth deciduous forests with acidic, mesic soils (NatureServe 2009)	Yes
Smooth Bur-marigold	*Bidens laevis*	Greene	-	T	Freshwater to brackish tidal mud flats and tidal marshes. Also found in swamps, marshy meadows, and along streams (NYNHP 2009).	Yes
Spongy Arrowhead	*Sagittaria montevidensis*	Greene	-	T	Freshwater to brackish intertidal mud flat; most abundant on these open mud flats but occasionally occurs in lower abundance in the taller vegetation associated with the adjacent and upslope brackish or fresh tidal marshes (NYNHP 2009).	Yes
Woodland Agrimony	*Agrimonia rostellata*	Albany (historical), Schenectady (historical), Westchester (historical)	-	T	Occurs in mesic forests, forested gorge slopes in calcareous bedrock, streambanks in rich forests, forested slopes adjacent to streams, forested limestone benches, dry oak woods, wooded pastures on rich soil, shrub thickets, clearings and fields (NYNHP 2009rr).	Yes

[1]NYDEC 2009. New York Nature Explorer [web site] at: http://www.dec.ny.gov/natureexplorer/app/
[2] E=Endangered, T=Threatened, C=Candidate, SC=Special Concern.
[3] These species may be present in the Project area if more detailed assessment concludes that the specific habitats they require are within the vicinity of the Project. Consultations with resource agencies in New York State have been initiated and are ongoing. CHPEI anticipates that further information from consultations with NYNHP, NYSDEC and USFWS will further refine this assessment of species potentially present within the Project area.

Table 9-5
Threatened and Endangered Cetaceans in the Nearshore Coastal Waters of New York

Common Name	*Scientific Name*	Federal Status	New York
Cetaceans			
Finback Whale	*Balaenoptera physalus*	E	E
Northern Right Whale	*Balaena glacialis*	E	E
Humpback Whale	*Megaptera novaeangliae*	E	E
Sei Whale	*Balaenoptera borealis*	E	E
Harbor Porpoise	*Phocoena phocoena*	SC	SC

Source: NYNHP 2008; RFMRP 2008 and 2010; NYSDEC 2010.
Note: E = endangered
SC = species of concern

Table 9-6
Threatened and Endangered Sea Turtles in the Nearshore Coastal Waters of New York

Common Name	*Scientific Name*	Federal Status	New York
Hawksbill sea turtle	*Eretmochelys imbricata*	E	E
Leatherback Turtle	*Dermochelys coriacea*	E	E
Kemp's Ridley Turtle	*Lepidochelys kempii*	E	E
Loggerhead Turtle	*Caretta caretta*	T	T
Green Turtle	*Chelonia mydas*	T	T

Source: NYNHP 2008; RFMRP 2008 and 2010; CTDEP 2010; NYSDEC 2010.
Note: E = endangered
T = threatened

Table 9-7
Preliminary List of Threatened and Endangered Aquatic Species (Other Than Fish) with the Potential to Occur along the Underwater Portions of the Transmission Cable Construction Zone

Common Name	Scientific Name	Counties with Recent NYDEC Occurrence Records[1]	Federal[2]	New York[2]	Habitat	Preliminary assessment of potential within the Project area[3]
Brook floater	*Alasmidonta varicose*	Ulster, Orange, Rockland	-	T	In running water and gravel riffles along small rivers and creeks (NYNHP 2009i).	No
Dwarf wedgemussel	*Alasmindonta heterodon*	Orange, Dutchess	E	E	Large or small rivers in cool, shallow water over cobble sediments with accumulated fine sediments (NYNHP 2009h).	No
Extra-striped snaketail	*Ophiogomphus anomalus*	Saratoga, Essex	-	SC	Nymphs develop in clear, rapid and cold, medium to large rivers with high dissolved oxygen content and high water quality (NYNHP 2009c).	Yes
Pygmy snaketail	*Ophiogomphus howei*	Saratoga	-	SC	Large, clear rivers with strong currents and/or rapids over coarse cobbles (NatureServe 2009).	Yes

[1]NYDEC 2009. New York Nature Explorer [web site] at: http://ww.dec.ny.gov/natureexplorer/app/. Includes only counties where appropriate habitat may be present along the Project route.
[2] E=Endangered, T=Threatened, C=Candidate, SC=Special Concern.
[3] These species may be present in the Project area if more detailed assessment concludes that the specific habitats they require are within the vicinity of the Project. Consultations with resource agencies in New York State have been initiated and are ongoing. CHPEI anticipates that further information from consultations with NYNHP, NYSDEC and USFWS will further refine this assessment of species potentially present within the Project area.

Table 12-1 Astoria Converter Station Estimated Source Sound Levels (dBA)		
Outdoor Sources	Number of Sources	Sound Power Level (dBA)
Converter Transformer	4 (3 running at any time)	98
Transformer Cooler Bank	3	90
Valve Cooler	11	93
Auxiliary Transformer	1	75
Air Conditioner	2	72
Indoor Sources	Number of Sources	Sound Power Level (dBA)
Phase Reactor	6	80
Valve Unit	19 per leg	83
Smoothing Reactor	2	80

Table 12-2 Astoria Converter Station Measured Short-Term Ambient Noise Levels (dBA)		
Location	Daytime	Late Night
	L_{eq}	L_{eq}
20th Avenue and 27th Street	57.3	52.6
20th Avenue and 31st Street	60.7	50.2
20th Avenue and 37th Street	58.0	47.7

Table 12-3
Astoria Converter Station
Calculated M3 Zone Property Line Noise Levels
Compared to NYC Zoning Resolution Standard (dB)

Description	Octave Band Center Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
New York City Zoning Resolution M3 Standard	79	74	69	63	57	52	48	45
Project Noise at M3 Property Line – Location 1	66	66	62	61	54	49	42	30
Project Noise at M3 Property Line – Location 2	66	66	62	60	55	48	41	30
Project Noise at M3 Property Line – Location 3	65	65	61	57	54	48	40	27
Project Noise at M3 Property Line – Location 4	64	63	60	56	53	47	39	26

Table 12-4
Astoria Converter Station
Calculated Residential Boundary Noise Levels
Compared to NYC Zoning Resolution Standard (dB)

Description	Octave Band Center Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
New York City Zoning Resolution M3-R Standard at Residential Boundary	73	68	63	57	51	46	42	39
Exterior Project Noise at 20th Avenue and 27th Street	43	43	38	37	29	20	0	0
Exterior Project Noise at 20th Avenue and 31st Street	42	39	33	28	20	10	0	0
Exterior Project Noise at 20th Avenue and 37th Street	47	45	41	36	32	23	3	0

Table 12-5
Astoria Converter Station
Calculated Residential Boundary Noise Levels
Compared to NYC Noise Code (dB)

Description	Octave Band Center Frequency (Hz)								
	31.5	63	125	250	500	1000	2000	4000	8000
NYC Noise Code for Interior of Residential Structures	70	61	53	46	40	36	34	33	32
Exterior Project Noise at 20th Avenue and 27th Street	39	43	43	38	37	29	20	0	0
20 dBA Transmission Loss for Single Family Home	4	7	15	24	30	33	39	31	27
Interior Project Noise at 20th Avenue and 27th Street	35	36	28	14	7	0	0	0	0
Exterior Project Noise at 20th Avenue and 31st Street	39	42	39	33	28	20	10	0	0
20 dBA Transmission Loss for Single Family Home	4	7	15	24	30	33	39	31	27
Interior Project Noise at 20th Avenue and 31st Street	35	35	24	9	0	0	0	0	0
Exterior Project Noise at 20th Avenue and 31st Street	39	47	45	41	36	32	23	3	0
20 dBA Transmission Loss for Single Family Home	4	7	15	24	30	33	39	31	27
Interior Project Noise at 20th Avenue and 31st Street	35	40	30	17	6	0	0	0	0

Table 12-6
Astoria Converter Station
Pure-Tone Analysis for Transformers

TDI- Astoria Converter Station
Transformers
One-Third Octave Band Analysis for Prominent Pure Tones

Typical Transformer Spectrum from the Handbook of Acoustical Measurements and Noise Control, Harris 1991

	1 / 3 Octave Band (dB)																													
	16	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1K**	**1.25K**	**1.6K**	**2K**	**2.5K**	**3.15K**	**4K**	**5K**	**6.3K**	**8K**	**10K**	**12.5K**
Measured Levels (dB)**			49	53	64	51	51	57	63	75	58	62	74	71	74	73	66	64	60	56	54	52	49	47	45	43	42	40	39	
1.) Does the 1/3 octave band have a greater dB value than do both of the adjacent 1/3 octave bands? ("1" is yes, "0" is no)		0	0	0	1	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
The actual arithmetic average of adjacent 1/3 octave bands, where applicable		-	-	-	52.0	-	-	-	-	60.5	-	-	66.5	-	72.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.) Does condition 1) apply, and is the 1/3 octave band greater than the arithmetic average of its adjacent 1/3 octave bands? ("1" is yes, "0" is no)		0	0	0	1	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
The amount by which the 1/3 octave band does exceed the arithmetic average of its adjacent 1/3 octave bands, where applicable		-	-	-	12.0	-	-	-	-	14.5	-	-	7.5	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Allowable exceedence per NYSDPS protocol		15	15	15	15	15	15	15	15	15	8	8	8	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
3.) Is the standard exceeded - is the 1/3 octave band a "prominent pure tone"?		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

Note: Definition of pure tone as defined by "Model Community Noise Control Ordinance" USEPA, 1975.

Table 12-7
Astoria Converter Station
Pure-Tone Analysis for Coolers

TDI- Astoria Converter Station
Valve Coolers
One-Third Octave Band Analysis for Prominent Pure Tones

Typical Cooler Spectrum from the Handbook of Acoustical Measurements and Noise Control, Harris 1991

	1 / 3 Octave Band (dB)																													
	16	**20**	**25**	**31.5**	**40**	**50**	**63**	**80**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1K**	**1.25K**	**1.6K**	**2K**	**2.5K**	**3.15K**	**4K**	**5K**	**6.3K**	**8K**	**10K**	**12.5K**
Measured Levels (dB)**					85	87	86	84	89	101	92	93	96	95	101	99	99	98	97	94	94	95	97	93	87	85	87	82	78	
1.) Does the 1/3 octave band have a greater dB value than do both of the adjacent 1/3 octave bands? ("1" is yes, "0" is no)		0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
The actual arithmetic average of adjacent 1/3 octave bands, where applicable		-	-	-	-	85.5	-	-	-	90.5	-	-	94.0	-	97.0	-	-	-	-	-	-	-	94.0	-	-	-	83.5	-	-	
2.) Does condition 1) apply, and is the 1/3 octave band greater than the arithmetic average of its adjacent 1/3 octave bands? ("1" is yes, "0" is no)		0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
The amount by which the 1/3 octave band does exceed the arithmetic average of its adjacent 1/3 octave bands, where applicable		-	-	-	-	1.5	-	-	-	10.5	-	-	2.0	-	4.0	-	-	-	-	-	-	-	3.0	-	-	-	3.5	-	-	
Allowable exceedence per NYSDPS protocol		15	15	15	15	15	15	15	15	15	8	8	8	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
3.) Is the standard exceeded - is the 1/3 octave band a "prominent pure tone"?		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

Note: Definition of pure tone as defined by "Model Community Noise Control Ordinance" USEPA, 1975.