

Appendix 17-A

CPV Valley

Map Level Assessment of Potential Gas Routing Options

1.0 INTRODUCTION

CPV Valley will utilize clean burning natural gas as its primary source of fuel and will likely utilize a combination of firm and interruptible natural gas transportation to serve the natural gas supply requirements of the Facility. It is intended that the supply and transportation portfolio developed to serve the Facility will minimize gas supply costs and provide high levels of reliability and operational flexibility. CPV Valley's primary upstream transportation path will be the FERC-regulated Millennium Pipeline, currently under construction, which is planned to be operational in late 2008. This upstream transportation path will be linked to the plant via one of two incremental service options currently the subject of on-going evaluation.

CPV Valley is reviewing two discrete options for gas transportation service to link the Facility to the Millennium system. Discussions with each of the two potential service providers, Millennium Pipeline ("Millennium") and Orange & Rockland ("O&R"), are in the preliminary stages, and will continue through the development process to fully define the commercial options available to the proposed CPV Valley Energy Center. Both entities have provided initial indications of their ability to provide gas transportation service to the CPV Valley Energy Center with the addition of certain facilities to tie the facility to the existing natural gas transportation grid. It is contemplated that any new natural gas pipeline lateral would be developed under Article VII of the Public Service Law or the Federal Energy Regulatory Commission (FERC) under its Section 7(c) certificate authority. The licensing of the natural gas pipeline lateral ultimately used to transport natural gas supplies to the Project is not part of this SEQRA review because, as an independent project, it would go through its own separate environmental review and approval process.

The two potential options include a direct interconnection with the Millennium system, which will also be the upstream transportation path for the CPV Valley Energy Center, via a new lateral pipeline from the Millennium system to the CPV Valley Energy Center, with an estimated length of 7 to 8 miles. The lateral would be built, owned and operated by Millennium Pipeline Company L.L.C., a FERC-regulated interstate pipeline company, and would be the subject of a separate FERC Section 7(c) permitting and environmental review process. The exact location and routing of the lateral would be determined by Millennium and approved by FERC as part of this process.

The second option for service to the facility is a connection to the O&R distribution system via a new lateral to the CPV Valley Energy Center. Preliminary discussions have indicated that the laterals would be 2 to 3 miles in length and would interconnect with a proposed O&R bulk transportation line that will originate at Minisink and terminate in New Hampton. As is the case with the Millennium option, the O&R lateral would be the subject of its own permitting and environmental review process, with location and final routing to be determined by O&R and approved by the appropriate regulatory agencies.

Due to the preliminary nature of these discussions, the commercial terms related to either of these options, such as service characteristics, operational flexibility and associated costs have yet to be determined or evaluated. CPV Valley LLC will be continuing discussions with both parties over the coming months to establish the most suitable transportation option. Once a service

provider is selected, the commercial agreements necessary to support the development of the appropriate gas transportation infrastructure will be negotiated and associated permitting activities will be initiated. For informational purposes, Figure 17-1 provides CPV's approximation of potential routings of the two lateral options under consideration. As was indicated previously, the final routing and alternative routings will be the responsibility of the transportation service provider selected and will be the subject of an independent permit review and approval process and, as such, may differ materially from those presented herein.

A map level and literature review of the probable environmental impacts to wildlife, wildlife habitats, wetlands, water bodies and resources, groundwater soils, vegetation, cultural resources and land use along the preferred and alternative corridors has been conducted. NY DEC wetland crossing information was obtained from the NYDEC freshwater wetland GIS data layer. Federal wetland crossing information was obtained from review of NWI data obtained from the U.S Fish and wildlife wetland data. Water body crossings and soils information were obtained from Orange County GIS data. Cultural resource information was obtained from review of New York State and National Historic Register GIS data. Land use information was determined from electronic image data specific to each town, when available. Where electronic land use data were not available, aerial photograph interpretation was performed. Information related to crossing lengths of wetlands, water bodies and land use was measured along the centerline of the Potential Routing Option corridor.

Table 1-1 summarizes the results. Details of the map level and literature review study are presented below. The evaluation shows that Potential Routing Options 1 and 2 are shorter in length than the other Potential Routing Options and also have fewer wetland crossing and stream crossing areas. However, for the Potential Routing Options with several wetland and stream crossings, with further evaluation rerouting would be likely in the sections of the lines where it is possible to avoid wetland crossings and waterbody crossings. Soils along the Potential Routing Options are mostly similar with some variations along specific sections of the routing options. Forested areas are less prevalent along Potential Routing Option 1, somewhat prevalent along the other Potential Routing Options with Potential Routing Option 4 having more forested areas. Further evaluation and potential rerouting may be considered to avoid forested areas. Cultural resources are not anticipated to be affected by the Potential Routing Options. Residential land use is present along the majority of Potential Routing Options 1 and 2, open/agricultural land use is present along the major portions of Potential Routing Options 3, 5 and 6 with some residential land use, and forested and residential land use is present along large portions of Potential Routing Option 4.

Routing options are anticipated to have relatively minimal environmental impacts with portions of potential routing options located in some cases in existing roadways and also portions of existing rights-of-way, with further evaluations and rerouting likely in sections of the lines where it would be possible to avoid wetland crossings and waterbody crossing, and utilization of construction techniques that will minimize potential impacts in sensitive locations along potential routing options.

**Table 1-1
Summary of Potential Gas Routing Options**

Alternatives	Distance	NY DEC Wetlands Crossed	Federal Wetlands Crossed	Number of Water bodies Crossed	Predominate Soils	Vegetation	Cultural Resources	Predominate Land Use
Potential Routing Option 1	3.1 miles	0	275 ft	0	Silty loams, sandy loams and gravelly loams with some stony soils	6% Forested	0	83% Residential
Potential Routing Option 2	3.97 miles	636 ft	426 ft	0	Silty loams, sandy loams and gravelly loams with some stony soils	16% Forested	0	71% Residential
Potential Routing Option 3	7.1 miles	0	7,337 ft	7 streams	Silty loams, sandy loams and gravelly loams with some stony soils	15% Forested	0 (located south of Primitive Baptist Church)	41% Open/agriculture 22% Residential
Potential Routing Option 4	9.6 miles	3,093 ft	4,703 ft	2 lakes or ponds, 6 streams	Stony, silty loams, sandy loams, and gravelly loams with some much and rock outcrop	50% Forested	0	50% Forested 42% Residential
Potential Routing Option 5	8.1 miles	2,424 ft	8,853 ft	10 streams	Stony, silty loams, sandy loams, and gravelly loams with some rock outcrop	13% Forested	0 (located south of Primitive Baptist Church)	44% Open/agriculture 22% Residential
Potential Routing Option 6	9.4 miles	452 ft	8,727 ft	3 streams	Stony, silty loams, sandy loams, and gravelly loams with some rock outcrop	21% Forested	0 (located south of Primitive Baptist Church)	36% Open/agriculture 26% Residential

2.0 POTENTIAL ROUTING OPTIONS

Potential Routing Option 1

This routing is primarily along existing roadways (along Post Road, Ridgebury Road, State Route 6 with a directional drill under Interstate 84 to the proposed plant site) and is approximately 17,500 feet (approximately 3.1 miles) long. Potential Routing Option 1 is located entirely in the Town of Wawayanda.

Wildlife Habitat

Potential Routing Option 1 crosses areas with land use that is mainly residential, with limited areas that have land use such as forested, open/agricultural, highway, commercial and community along this proposed alternative's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of wildlife habitat that may be present. Inquiry will be made as to the presence of Federal and State endangered and threatened wildlife species that may occur along Potential Routing Option 1 as part of the permitting process.

Wetlands

Potential Routing Option 1 does not cross DEC wetlands along this proposed alternative's corridor centerline (see Table 1-2). Potential Routing Option 1 does cross approximately 275 feet of federal wetlands along this proposed alternative's corridor centerline (see Table 1-3).

Waterbodies and Water Resources

Potential Routing Option 1 does not cross any streams along this proposed alternative's corridor centerline (see Table 1-4).

Groundwater

Groundwater will be encountered during construction Potential Routing Option 1. Groundwater is expected be encountered in sections of this routing option where the underground line traverses wetlands.

Alternative	Distance (feet) crossed
Potential Routing Option 1	0
Potential Routing Option 2	67.47
Potential Routing Option 3	0
Potential Routing Option 4	2,192.74
Potential Routing Option 5	2,183.35
Potential Routing Option 6	452.02

Alternative	Distance (feet) crossed
Potential Routing Option 1	275.39
Potential Routing Option 2	426.75
Potential Routing Option 3	7,337.23
Potential Routing Option 4	4,703.71
Potential Routing Option 5	8,853.64
Potential Routing Option 6	8,727.95

Alternative	Category	Feature	Name
Potential Routing Option 1	None	None	None
Potential Routing Option 2	None	None	None
Potential Routing Option 3	Stream	Stream, Single-line, width <40 feet	Rutgers Creek
	Stream	Stream, Single-line, width <40 feet	Rutgers Creek
	Stream	Stream, Single-line, width <40 feet	Rutgers Creek
	Stream	Stream, Single-line, width <40 feet	Indigot Creek
	Stream	Stream, Single-line, width <40 feet	Catlin Creek
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
Potential Routing Option 4	Shoreline	Perennial Lake or Pond	Unnamed
	Shoreline	Perennial Lake or Pond	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Indigot Creek
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Intermittent Stream	Joe Creek
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
Potential Routing Option 5	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Rutgers Creek
	Stream	Stream, Single-line, width <40 feet	Indigot Creek
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Joe Creek
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed

Alternative	Category	Feature	Name
Potential Routing Option 6	Stream	Stream, Single-line, width <40 feet	Rutgers Creek
	Stream	Stream, Single-line, width <40 feet	Rutgers Creek
	Stream	Stream, Single-line, width <40 feet	Rutgers Creek
	Stream	Stream, Single-line, width <40 feet	Indigot Creek
	Stream	Stream, Single-line, width <40 feet	Catlin Creek
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Stream, Single-line, width <40 feet	Unnamed
	Stream	Intermittent Stream	Unnamed

Soils

The Orange County Soil Survey (USDA, 2008) includes mapped soils for Potential Routing Option 1. The soils along the Potential Routing Option 1 are a mix of silty loams, sandy loams, and gravelly loams with some stony soils and rock outcrop (USDA, 2008). Common soils include Mardin gravelly silt loam (identified as MdB and MdC on Table 1-5). The soil map units for the Potential Routing Option 1 and percentage occurrence are presented in Table 1-5.

Vegetation

Potential Routing Option 1 crosses areas with land use that is mainly residential, with limited areas that have land use such as forested, open/agricultural, highway, commercial and community along this proposed alternative's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of vegetation present. Inquiry will be made as to presence of Federal and State endangered and threatened plant species that may occur along Potential Routing Option 1 as part of the permitting process.

Cultural Resources

Cultural resources are not crossed by the Potential Routing Option 1 corridor.

Land Use

Potential Routing Option 1 crosses areas with land use that is mainly residential (83.27%), with limited areas that have land use such as forested (6.17%), open/agricultural (4.31%), highway (2.89%), commercial (2.15%) and community (1.21%) along this proposed alternative's corridor centerline (see Table 1-6).

**Table 1-5
Soil Types Along Potential Routing Options**

Soil Type	Soil Type Description	Potential Routing Option 1		Potential Routing Option 2		Potential Routing Option 3		Potential Routing Option 4		Potential Routing Option 5		Potential Routing Option 6	
		Length (Feet)	Percent of Total	Length (Feet)	Percent of Total	Length (Feet)	Percent of Total	Length (Feet)	Percent of Total	Length (Feet)	Percent of Total	Length (Feet)	Percent of Total
Ab	Alden silt loam	471.20	2.68	69.63	0.34	1050.37	2.77	1609.93	3.18	524.99	1.23		
BnB	Bath-Nassau channery silt loams, 3 to 8 percent slopes					1000.81	2.64	1419.54	2.81	3448.57	8.09	1000.81	2.09
BnC	Bath-Nassau channery silt loams, 8 to 15 percent slopes	628.17	3.57			2399.08	6.33	640.10	1.27	3638.19	8.54	2963.80	6.20
Ca	Canandaigua silt loam									2165.98	5.08		
Cf	Carlisle, Muskego, and Pinnebog soils					200.39	0.53	591.79	1.17	200.39	0.47	200.39	0.42
CgB	Castile gravelly silt loam, 3 to 8 percent slopes					292.66	0.77			486.34	1.14	292.66	0.61
ErA	Erie gravelly silt loam, 0 to 3 percent slopes	1858.21	10.56	991.52	4.79	3611.90	9.53	1223.98	2.42	3799.02	8.91	3611.90	7.55
ErB	Erie gravelly silt loam, 3 to 8 percent slopes	1465.03	8.33	4326.40	20.88	1096.13	2.89	6362.04	12.57			4099.78	8.57
ESB	Erie extremely stony soils, gently sloping	275.17	1.56	176.55	0.85	1881.89	4.96	10192.32	20.14	669.04	1.57	2507.58	5.24
Fd	Fredon loam					681.06	1.80			871.02	2.04	681.06	1.42
HoA	Hoosic gravelly sandy loam, 0 to 3 percent slopes	138.67	0.79	578.85	2.79	267.29	0.71	490.56	0.97	267.29	0.63	267.29	0.56
HoB	Hoosic gravelly sandy loam, 3 to 8 percent slopes	147.15	0.84	167.53	0.81	1707.39	4.50	938.17	1.85	1504.14	3.53	1707.39	3.57
HoC	Hoosic gravelly sandy loam, 8 to 15 percent slopes	696.51	3.96	704.98	3.40	290.50	0.77	472.59	0.93	290.50	0.68	290.50	0.61
HoD	Hoosic gravelly sandy loam, 15 to 25 percent slopes					658.58	1.74	966.59	1.91	2151.12	5.05	658.58	1.38

**Table 1-5
Soil Types Along Potential Routing Options**

		Potential Routing Option 1		Potential Routing Option 2		Potential Routing Option 3		Potential Routing Option 4		Potential Routing Option 5		Potential Routing Option 6	
Ma	Madalin silt loam	178.42	1.01	263.71	1.27	4849.41	12.79	502.45	0.99	4280.23	10.04	5816.90	12.16
MdB	Mardin gravelly silt loam, 3 to 8 percent slopes	4384.61	24.93	3059.58	14.77	650.64	1.72	8334.26	16.47	3350.61	7.86	1315.98	2.75
MdC	Mardin gravelly silt loam, 8 to 15 percent slopes	2254.81	12.82	5302.09	25.59	2429.81	6.41	6485.95	12.82	434.13	1.02	3945.07	8.25
MdD	Mardin gravelly silt loam, 15 to 25 percent slopes	243.37	1.38	320.33	1.55			335.01	0.66	110.93	0.26	173.18	0.36
MNE	Mardin soils, steep	184.03	1.05					154.53	0.31				
My	Middlebury silt loam					3581.05	9.45			1912.00	4.49	3581.05	7.49
NaD	Nassau channery silt loam, 15 to 25 percent slopes					1976.82	5.21	1257.60	2.49	316.82	0.74	2291.68	4.79
OVE	Otisville and Hoosic soils, steep					212.01	0.56			927.62	2.18	212.01	0.44
Pa	Palms muck							702.29	1.39				
Pb	Palms and Wawayanda soils							1528.96	3.02				
Ra	Raynham silt loam	875.02	4.97	1209.26	5.84	3450.26	9.10	549.77	1.09	3552.30	8.33	3450.26	7.21
RbA	Rhinebeck silt loam, 0 to 3 percent slopes					2145.94	5.66			5547.33	13.02	2543.33	5.32
RhA	Riverhead sandy loam, 0 to 3 percent slopes					777.39	2.05					777.39	1.63
RhB	Riverhead sandy loam, 3 to 8 percent slopes	959.21	5.45	1364.17	6.58	1644.80	4.34			1660.24	3.90	1644.80	3.44
RhC	Riverhead sandy loam, 8 to 15 percent slopes							278.94	0.55				
RSB	Rock outcrop-Nassau complex, undulating							325.91	0.64			805.94	1.69
RSD	Rock outcrop-Nassau complex, hilly	1178.01	6.70			511.47	1.35	1211.87	2.40	511.47	1.20	2445.95	5.11
RSF	Rock outcrop-Nassau complex, very steep							270.32	0.53				

**Table 1-5
Soil Types Along Potential Routing Options**

Sb	Scarboro mucky sandy loam	Potential Routing Option 1		Potential Routing Option 2		Potential Routing Option 3		Potential Routing Option 4		Potential Routing Option 5		Potential Routing Option 6	
								646.30	1.28				
ScA	Scio silt loam, 0 to 3 percent slopes	1651.31	9.39	1701.89	8.21								
SXC	Swartswood and Mardin very stony soils, sloping			481.25	2.32			1801.73	3.56				
Tg	Tioga silt loam					188.05	0.50					188.05	0.39
W	Water							411.65	0.81				
Wd	Wayland silt loam					356.04	0.94					356.04	0.74
WuB	Wurtsboro gravelly loam, 3 to 8 percent slopes							892.21	1.76				
Total		17588.92		20717.74		37911.73		50597.37		42620.26		47,829.35	

Table 1-6 Land Use Along Potential Routing Options 1 and 2				
Land Use	Potential Routing Option 1		Potential Routing Option 2	
	Distance Along Corridor Centerline (Miles)	% of Total	Distance Along Corridor Centerline (Miles)	% of Total
Residential	2.77	83.27	2.80	71.04
Open/Ag	0.14	4.31	0.09	2.39
Forested	0.21	6.17	0.65	16.42
Community	0.04	1.21	0.00	0.00
Commercial	0.07	2.15	0.25	6.37
Highway	0.10	2.89	0.15	3.79
Total	3.33		3.94	

Potential Routing Option 2

This routing is primarily along existing roadways and is approximately 21,000 feet (approximately 3.97 miles) along Ridgebury Road, Seward Road, State Route 6 with a directional drill under Interstate 84 to the plant site. Potential Routing Option 2 is located entirely in the Town of Wawayanda.

Wildlife Habitat

Potential Routing Option 2 crosses areas with land use that is mainly residential and forested, with other areas that have land use such as commercial, highway, and open/agricultural along this proposed alternative's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of wildlife habitat that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened wildlife species that may occur along Potential Routing Option 2 as part of the permitting process.

Wetlands

Potential Routing Option 2 crosses 636 feet of DEC wetlands along this proposed alternative's corridor centerline (see Table 1-2). Potential Routing Option 2 does cross approximately 426 feet of federal wetlands along this proposed alternative's corridor centerline (see Table 1-3).

Waterbodies and Water Resources

Potential Routing Option 2 does not cross any streams along this proposed alternative's corridor centerline (see Table 1-4).

Groundwater

Groundwater will be encountered during construction Potential Routing Option 2. Groundwater is expected to be encountered in sections of this Potential routing option where the underground line traverses wetlands.

Soils

The Orange County Soil Survey (USDA, 2008) includes mapped soils for Potential Routing Option 2. The soils along the Potential Routing Option 2 are a mix of silty loams, sandy loams, and gravelly loams with some stony soil (USDA, 2008). Common soils include Mardin gravelly silt loam (identified as MdC on Table 1-5) and Erie gravelly silt loam (identified as ErB on Table 1-5). The soil map units for the Potential Routing Option 2 and percentage occurrence are presented in Table 1-5.

Vegetation

Potential Routing Option 2 crosses areas with land use that is mainly residential and forested, with other areas that have land use such as commercial, highway, and open/agricultural along this proposed alternative's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of vegetation that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened plant species that may occur along Potential Routing Option 2 as part of the permitting process.

Cultural Resources

Cultural resources are not crossed by the Potential Routing Option 2 corridor.

Land Use

Potential Routing Option 2 crosses areas with land use that is mainly residential (71.04%) and forested (16.42%), with other areas that have land use such as commercial (6.37%), highway (3.79%), and open/agricultural (2.39%) along this proposed alternative's corridor centerline (see Table 1-6).

Potential Routing Option 3

This routing is approximately 7.10 miles long. Potential Routing Option 3 is located in the Town of Wawayanda and the Town of Minisink. This potential routing option crosses Interstate 84 and collocates along either an abandoned railroad corridor or a power line corridor for the entire distance to the Millennium Pipeline. This corridor provides the ability to move from one existing corridor to the other, depending on the most favorable location.

Wildlife Habitat

Potential Routing Option 3 crosses areas with land use that is mainly open/agricultural, residential, and forested, with other areas that have land use such as open vacant, industrial, commercial, and limited areas with recreation land use and highway along this potential routing option's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of wildlife habitat that may be present. Inquiry will be made as to

presence of Federal and State endangered and threatened wildlife species that may occur along Potential Routing Option 3 as part of the permitting process.

Wetlands

Potential Routing Option 3 does not cross DEC wetlands along this potential routing option's corridor centerline (see Table 1-2). Potential Routing Option 3 does cross approximately 7,337 feet of federal wetlands along this potential routing option's corridor centerline (see Table 1-3).

Waterbodies and Water Resources

Potential Routing Option 3 crosses seven streams including Rutgers Creek, Indigot Creek and Catlin Creek along this potential routing option's corridor centerline (see Table 1-4).

Groundwater

Groundwater would be encountered during construction of the Potential Routing Option 3. Groundwater is expected to be encountered in sections of this routing option where the underground line traverses wetlands or waterbodies.

Soils

The Orange County Soil Survey (USDA, 2008) includes mapped soils for Potential Routing Option 3. The soils along the Potential Routing Option 3 are a mix of silty loams, sandy loams, and gravelly loams with some stony soil and rock outcrop (USDA, 2008). Common soils include Mardin silt loam (identified as Ma on Table 1-5) and Erie gravelly silt loam (identified as ErA on Table 1-5). The soil map units for the Potential Routing Option 3 and percentage occurrence are presented in Table 1-5.

Vegetation

Potential Routing Option 3 crosses areas with land use that is mainly open/agricultural, residential, and forested, with other areas that have land use such as open vacant, industrial, commercial, and limited areas with recreation land use and highway along this potential routing option's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of vegetation that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened plant species that may occur along Potential Routing Option 3 as part of the permitting process.

Cultural Resources

The Potential Routing Option 3 corridor is located south of the Primitive Baptist Church of Brookfield.

Land Use

Potential Routing Option 3 crosses areas with land use that is mainly open/agricultural (41.06%), residential (22.04%) and forested (14.96%), with other areas that have land use such as open vacant (8.05%), industrial (5.67%), commercial (4.29%), and limited areas with recreation land use (2.16%) and highway (1.77%) along this potential routing option's corridor centerline (see Table 1-7).

Land Use	Potential Routing Option 3		Potential Routing Option 4		Potential Routing Option 5		Potential Routing Option 6	
	Distance Along Corridor Centerline (Miles)	% of Total	Distance Along Corridor Centerline (Miles)	% of Total	Distance Along Corridor Centerline (Miles)	% of Total	Distance Along Corridor Centerline (Miles)	% of Total
Residential	1.58	22.04	4.06	42.34	1.83	22.47	2.37	25.64
Open/Ag	2.95	41.06	0.00	0.00	3.54	43.64	3.39	36.65
Forested	1.07	14.96	4.76	49.72	1.05	12.90	1.92	20.70
Recreation	0.16	2.16	0.00	0.00	0.00	0.00	0.16	1.68
Commercial	0.31	4.29	0.13	1.39	0.43	5.35	0.31	3.33
Industrial	0.41	5.67	0.25	2.65	0.41	5.01	0.41	4.39
Open Vacant	0.58	8.05	0.37	3.90	0.73	9.04	0.58	6.24
Highway	0.13	1.77	0.00	0.00	0.13	1.60	0.13	1.37
Total	7.18		9.58		8.12		9.26	

Potential Routing Option 4

This routing is approximately 9.60 miles long. Potential Routing Option 4 is located in the Town of Wawayanda, a small section in the Town of Walkill, and the remainder in the Town of Greenville. This routing option follows the electric transmission corridor that runs southwesterly past the proposed Project site, staying north of Interstate 84, to a point where the transmission line corridor is at its closest point to the Millennium Pipeline. At that point, the routing option runs greenfield to the Millennium Pipeline. The total distance of this routing option includes 5.4 miles that are collocated along the power line and 4.2 miles that are greenfield routing.

Wildlife Habitat

Potential Routing Option 4 crosses areas with land use that is mainly forested and residential with other limited areas with open vacant land use, industrial, and commercial along this proposed alternative's corridor centerline. The types of land use give an indication of the nature of wildlife habitat that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened wildlife species that may occur along Potential Routing Option 4 as part of the permitting process.

Wetlands

Potential Routing Option 4 crosses 3,093 feet of DEC wetlands along this proposed alternative's corridor centerline (see Table 1-2). Potential Routing Option 4 crosses approximately 4,703 feet of federal wetlands along this proposed alternative's corridor centerline (see Table 1-3).

Waterbodies and Water Resources

Potential Routing Option 4 crosses two perennial lakes or ponds, six streams including Indigot Creek, and one intermittent creek, Joe Creek, along this potential routing option's corridor centerline (see Table 1-4).

Groundwater

Groundwater would be encountered during construction of the Potential Routing Option 4. Groundwater is expected to be encountered in sections of this routing option where the underground line traverses wetlands or waterbodies.

Soils

The Orange County Soil Survey (USDA, 2008) includes mapped soils for Potential Routing Option 4. The soils along the Potential Routing Option 4 are a mix of stony, silty loams, sandy loams, and gravelly loams with some muck and rock outcrop (USDA, 2008). Common soils include Erie extremely stony soils (identified as ESB on Table 1-5) and Mardin gravelly silt loam (identified as MdB on Table 1-5). The soil map units for the Potential Routing Option 4 and percentage occurrence are presented in Table 1-5.

Vegetation

Potential Routing Option 4 crosses areas with land use that is mainly forested and residential with other limited areas with open vacant land use, industrial, and commercial along this proposed alternative's corridor centerline. The types of land use give an indication of the nature of vegetation that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened plant species that may occur along Potential Routing Option 4 as part of the permitting process.

Cultural Resources

Cultural resources are not crossed by the Potential Routing Option 4 corridor.

Land Use

Potential Routing Option 4 crosses areas with land use that is mainly forested (49.72%) and residential (42.34%) with other limited areas with open vacant land use (3.90%), industrial (2.65%), and commercial (1.39%) along this proposed alternative's corridor centerline (see Table 1-7).

Potential Routing Option 5

This routing is approximately 8.10 miles long. Potential Routing Option 5 is located in the Town of Wawayanda and the Town of Minisink. This routing follows the Potential Routing Option 3 discussed earlier and then leaves that corridor at approximately milepost 5.1 and “cut the corner” and run greenfield south to a proposed meter site. Potential Routing Option 5 has approximately 3 miles of greenfield.

Wildlife Habitat

Potential Routing Option 5 crosses areas with land use that is mainly open/agricultural, residential, and forested with other limited areas with open vacant land use, commercial, industrial, and highway along this proposed alternative’s corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of wildlife habitat that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened wildlife species that may occur along the Potential Routing Option 5 as part of the permitting process.

Wetlands

Potential Routing Option 5 crosses 2,424 feet of DEC wetlands along this routing option’s corridor centerline (see Table 1-2). Potential Routing Option 5 crosses approximately 8,853 feet of federal wetlands along this proposed alternative’s corridor centerline (see Table 1-3).

Waterbodies and Water Resources

Potential Routing Option 5 crosses 10 streams including Rutgers Creek, Indigot Creek, and Joe Creek along this proposed alternative’s corridor centerline (see Table 1-4).

Groundwater

Groundwater would be encountered during construction of the Potential Routing Option 5. Groundwater is expected to be encountered in sections of this routing option where the underground line traverses wetlands or waterbodies.

Soils

The Orange County Soil Survey (USDA, 2008) includes mapped soils for Potential Routing Option 5. The soils along the Potential Routing Option 5 are a mix of silty loams, sandy loams, and gravelly loams with some rock outcrop (USDA, 2008). Common soils include Rhinebeck silt loam (identified as RbA on Table 1-5) and Mardin silt loam (identified as Ma on Table 1-5). The soil map units for the Potential Routing Option 5 and percentage occurrence are presented in Table 17-5.

Vegetation

Potential Routing Option 5 crosses areas with land use that is mainly open/agricultural, residential, and forested with other limited areas with open vacant land use, commercial, industrial, and highway along this proposed alternative's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of vegetation that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened plant species that may occur along the Potential Routing Option 5 as part of the permitting process.

Cultural Resources

The Potential Routing Option 5 corridor is located south of the Primitive Baptist Church of Brookfield.

Land Use

Potential Routing Option 5 crosses areas with land use that is mainly open/agricultural (43.64%), residential (22.47%) and forested (12.90%) with other limited areas with open vacant land use (9.04%), commercial (5.35%), industrial (5.01%), and highway (1.60%) along this routing option's corridor centerline (see Table 1-7).

Potential Routing Option 6

This routing is approximately 9.40 miles long. Potential Routing Option 6 is located in the Town of Wawayanda and the Town of Minisink. This routing to a proposed meter station follows the Potential Routing Option 3 discussed earlier and then leaves the corridor and parallels the Millennium Pipeline to a proposed meter site.

Wildlife Habitat

Potential Routing Option 6 crosses areas with land use that is mainly open/agricultural, residential, and forested with other limited areas with open vacant, industrial, commercial, and recreation along this proposed alternative's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of wildlife habitat that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened wildlife species that may occur along the Potential Routing Option 6 as part of the permitting process.

Wetlands

Potential Routing Option 6 crosses 452 feet of DEC wetlands along this potential routing option's corridor centerline (see Table 1-2). Potential Routing Option 6 crosses approximately 8,727 feet of federal wetlands along this proposed alternative's corridor centerline (see Table 1-3).

Waterbodies and Water Resources

Potential Routing Option 6 crosses nine streams including Rutgers Creek, Indigot Creek, Catlin Creek, and four unnamed streams along this proposed alternative's corridor centerline (see Table 1-4).

Groundwater

Groundwater would be encountered during construction of the Potential Routing Option 6. Groundwater is expected to be encountered in sections of this routing option where the underground line traverses wetlands or waterbodies.

Soils

The Orange County Soil Survey (USDA, 2008) includes mapped soils for Potential Routing Option 6. The soils along the Potential Routing Option 6 are a mix of silty loams, sandy loams, and gravelly loams with some stony soils and rock outcrop (USDA, 2008). Common soils include Madalin silt loam (identified as Ma on Table 1-5), Rhinebeck silt loam (identified as RbA on Table 1-5) and Erie gravelly silt loam (identified as ErB on Table 1-5). The soil map units for the Potential Routing Option 6 and percentage occurrence are presented in Table 1-5.

Vegetation

Potential Routing Option 6 crosses areas with land use that is mainly open/agricultural, residential, and forested with other limited areas with open vacant, industrial, commercial, and recreation along this proposed alternative's corridor centerline (see Land Use write up below). The types of land use give an indication of the nature of vegetation that may be present. Inquiry will be made as to presence of Federal and State endangered and threatened plant species that may occur along the Potential Routing Option 6 as part of the permitting process.

Cultural Resources

Potential Routing Option 6 corridor is located south of the Primitive Baptist Church of Brookfield.

Land Use

Potential Routing Option 6 crosses areas with land use that is mainly open/agricultural (36.35%), residential (25.64%) and forested (20.70%) with other limited areas with open vacant (6.24%), industrial (4.39%), commercial (3.33%), and recreation (1.68%) along this proposed alternative's corridor centerline (see Table 1-7).

Installation Techniques

Construction of the gas line will be the responsibility of the Gas supply company. It is anticipated that conventional overland pipeline construction techniques would be used for installation of the various alternatives. Generally, the trench will be excavated to a depth that

will permit burial of the pipe with a minimum of 3 feet of cover. Overland trenching may be accomplished using a conventional backhoe or a rotary wheel-ditching machine.

Construction and Operational Impacts

Potential Routing Option 1

Wildlife Habitat

Routing is primarily along existing roadways in residential areas with limited areas that are forested and with open/agricultural areas. Construction activities are short term and some areas disturbed will revert to similar habitat types previous to installation while other sections may have habitat fragmentation. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Wetlands

Routing does not cross DEC wetlands, but does cross approximately 275 feet of federal wetlands. Construction across wetlands will typically be accomplished using conventional pipeline construction techniques/procedures that may reduce construction right-of-way. Construction activities are short term and mitigation procedures will include installation of erosion control devices, restoration, or replacement according to permitting process conditions. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Waterbodies and Water Resources

This routing option does not cross any streams along the route.

Groundwater

Groundwater would be encountered during construction activities.

A spill control plan will be in-place during construction to minimize potential impacts from fuel and lubricants. Shallow bedrock has been identified for a small portion of the routing option. If blasting of bedrock is necessary, a blasting plan will be in-place to support construction. The plan will include the identification of any nearby water wells and pre and post-blast surveys of those wells.

Soils

The soils along the Potential Routing Option 1 are a mix of silty loams, sandy loams, and gravelly loams with some stony soils and rock outcrop (USDA, 2008). Common soils include Mardin gravelly silt loam (identified as MdB and MdC on Table 1-5). In areas not in existing roadways, construction could result in temporary soil erosion, loss of soil productivity due to compaction, or damage to soil structure from heavy equipment. Erosion potential may increase due to potential clearing, grading, trenching, and backfilling. Soil structural damage and

compaction could result from construction activities during excessively wet periods. Mitigation measures can include implementation of a Project-specific Stormwater Pollution Prevention Plan (SWPPP) and Project-specific Spill Control, Contamination and Countermeasures Plan (SPCC Plan) developed prior to construction.

Vegetation

Routing is primarily along existing roadways in residential areas with limited areas that are forested and with open/agricultural areas. Construction activities are short term and some areas disturbed will revert to similar vegetation types previous to installation while other sections may have habitat fragmentation where vegetation occurs. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Cultural Resource

This routing option does not cross any cultural resource areas along the route.

Land Use

Routing is primarily along existing roadways in residential areas with limited areas that are forested and with open/agricultural, highway and commercial areas. Construction activities are short term and areas that were disturbed may have similar land use type and some areas become a permanent right-of-way. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Potential Routing Option 2

Wildlife Habitat

Routing is primarily along existing roadways in residential areas and with some areas forested and other sections with commercial, highway and open/agricultural areas. Construction activities are short term and some areas disturbed will revert to similar habitat types previous to installation while other sections may have habitat fragmentation. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Wetlands

Routing crosses 636 feet of DEC wetlands and approximately 426 feet of federal wetlands. Construction across wetlands will typically be accomplished using conventional pipeline construction techniques/procedures that may reduce construction right-of-way. Construction activities are short term and mitigation procedures will include installation of erosion control devices, restoration, or replacement according to permitting process conditions. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Waterbodies and Water Resources

This routing option does not cross any streams along the route.

Groundwater

Groundwater would be encountered during construction.

A spill control plan will be in-place during construction to minimize potential impacts from fuel and lubricants. The blasting of bedrock, potentially impacting water wells, is not anticipated along this routing.

Soils

The soils along the Potential Routing Option 2 are a mix of silty loams, sandy loams, and gravelly loams with some stony soil (USDA, 2008). Common soils include Mardin gravelly silt loam (identified as MdC on Table 1-5) and Erie gravelly silt loam (identified as ErB on Table 1-5). In areas not in existing roadways, construction could result in temporary soil erosion, loss of soil productivity due to compaction, or damage to soil structure from heavy equipment. Erosion potential may increase due to potential clearing, grading, trenching, and backfilling. Soil structural damage and compaction could result from construction activities during excessively wet periods. Mitigation measures can include implementation of a Project-specific SWPPP and Project-specific SPCC Plan developed prior to construction.

Vegetation

Routing is primarily along existing roadways in residential areas with limited areas that are forested and with open/agricultural areas. Construction activities are short term and some areas disturbed will revert to similar vegetation types previous to installation while other sections may have habitat fragmentation where vegetation occurs. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Cultural Resources

This routing option does not cross any cultural resource areas along the route.

Land Use

Routing is primarily along existing roadways in residential areas with some areas that are forested and limited areas that have land use such as commercial, highway and open/agricultural, highway and commercial areas. Construction activities are short term and areas that were disturbed may have similar land use type and some areas become a permanent right-of-way. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Potential Routing Option 3

Wildlife Habitat

Routing is primarily along an existing abandoned railroad corridor or a power line corridor. Land Use along this routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, commercial, and limited areas with recreation land use and highway. Construction activities are short term and some areas disturbed will revert to similar habitat types previous to installation while other sections may have habitat fragmentation. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Wetlands

Routing does not cross DEC wetlands but does cross approximately 7,337 feet of federal wetlands. Construction across wetlands will typically be accomplished using conventional pipeline construction techniques/procedures that may reduce construction right-of-way. Construction activities are short term and mitigation procedures will include installation of erosion control devices, restoration, or replacement according to permitting process conditions. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Waterbodies and Water Resources

This routing option crosses seven streams including Rutgers Creek, Indigot Creek, and Catlin Creek. Installation will be accomplished by either a “wet” or “dry” construction technique. The objective of these methods is to minimize turbidity in and siltation of the waterbody. Alternate “dry” crossing techniques may involve boring or horizontal directional drilling. Construction activities are short term and mitigation involves the minimization of turbidity and siltation through selection of the construction method according to the nature of the characteristics of each specific waterbody crossing. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Groundwater

Groundwater will be encountered during construction.

A spill control plan will be in-place during construction to minimize potential impacts from fuel and lubricants. Shallow bedrock has been identified for a small portion of the routing option. If blasting of bedrock is necessary, a blasting plan will be in-place to support construction. The plan will include the identification of any nearby water wells and pre and post-blast surveys of those wells

Soils

The soils along the Potential Routing Option 3 are a mix of silty loams, sandy loams, and gravelly loams with some stony soil and rock outcrop (USDA, 2008). Common soils include Mardin silt loam (identified as Ma on Table 1-5) and Erie gravelly silt loam (identified as ErA on Table 1-5). Construction could result in temporary soil erosion, loss of soil productivity due to compaction, or damage to soil structure from heavy equipment. Erosion potential may increase due to potential clearing, grading, trenching, and backfilling. Soil structural damage and compaction could result from construction activities during excessively wet periods. Mitigation measures can include implementation of a Project-specific SWPPP and Project-specific SPCC Plan developed prior to construction.

Vegetation

Routing is primarily along an existing abandoned railroad corridor or a power line corridor. Land Use along this routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, commercial, and limited areas with recreation land use and highway. Construction activities are short term and some areas disturbed will revert to similar vegetation types previous to installation while other sections may have habitat fragmentation where vegetation occurs. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Cultural Resources

This routing alternative does not cross any cultural resource areas along the route.

Land Use

Routing is primarily along an existing abandoned railroad corridor or a power line corridor. Land Use along this routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, commercial, and limited areas with recreation land use and highway. Construction activities are short term and areas that were disturbed may have similar land use type and some areas become a permanent right-of-way. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Potential Routing Option 4

Wildlife Habitat

Routing is along portions of an electric transmission corridor and portions where existing corridors are not present. Land Use along this routing option has been noted as mainly forested and residential with other limited areas with open vacant land use, industrial, and commercial. Construction activities are short term and some areas disturbed will revert to similar habitat types previous to installation while other sections may have habitat fragmentation. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Wetlands

Routing crosses 3,093 feet of DEC wetlands and approximately 4,703 feet of federal wetlands. Construction across wetlands will typically be accomplished using conventional pipeline construction techniques/procedures that may reduce construction right-of-way. Construction activities are short term and mitigation procedures will include installation of erosion control devices, restoration, or replacement according to permitting process conditions. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Waterbodies and Water Resources

This routing option crosses two perennial lakes/ponds, six streams including Indigot Creek, and one intermittent creek, Joe Creek. Installation will be accomplished by either a “wet” or “dry” construction technique. The objective of these methods is to minimize turbidity in and siltation of the waterbody. Alternate “dry” crossing techniques may involve boring or horizontal directional drilling. Construction activities are short term and mitigation involves the minimization of turbidity and siltation through selection of the construction method according to nature of the characteristics of each specific waterbody crossing. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Groundwater

Groundwater would be encountered during construction activities.

A spill control plan will be in-place during construction to minimize potential impacts from fuel and lubricants. Shallow bedrock has been identified for a small portion of the routing option. If blasting of bedrock is necessary, a blasting plan will be in-place to support construction. The plan will include the identification of any nearby water wells and pre and post-blast surveys of those wells.

Soils

The soils along the Potential Routing Option 4 are a mix of stony, silty loams, sandy loams, and gravelly loams with some muck and rock outcrop (USDA, 2008). Common soils include Erie extremely stony soils (identified as ESB on Table 1-5) and Mardin gravelly silt loam (identified as MdB on Table 1-5). Construction could result in temporary soil erosion, loss of soil productivity due to compaction, or damage to soil structure from heavy equipment. Erosion potential may increase due to potential clearing, grading, trenching, and backfilling. Soil structural damage and compaction could result from construction activities during excessively wet periods. Mitigation measures can include implementation of a Project-specific SWPPP and Project-specific SPCC Plan developed prior to construction.

Vegetation

Routing is along portions of an electric transmission corridor and portions where existing corridors are not present. Land Use along this potential routing option has been noted as mainly forested and residential with other limited areas with open vacant land use, industrial, and commercial. Construction activities are short term and some areas disturbed will revert to similar vegetation types previous to installation while other sections may have habitat fragmentation where vegetation occurs. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Cultural Resources

This potential routing option does not cross any cultural resource areas along the route.

Land Use

Routing is along portions of an electric transmission corridor and portions where existing corridors are not present. Land Use along this potential routing option has been noted as mainly forested and residential with other limited areas with open vacant land use, industrial, and commercial. Construction activities are short term and areas that were disturbed may have similar land use type and some areas become a permanent right-of-way. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Potential Routing Option 5

Wildlife Habitat

Routing is primarily along a portion of an existing abandoned railroad corridor or a power line corridor and then portions where existing corridors are not present. Land Use along this potential routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, commercial, and highway. Construction activities are short term and some areas disturbed will revert to similar habitat types previous to installation while other sections may have habitat fragmentation. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Wetlands

Routing crosses 2,424 feet of DEC wetlands and approximately 8,853 feet of federal wetlands. Construction across wetlands will typically be accomplished using conventional pipeline construction techniques/procedures that may reduce construction right-of-way. Construction activities are short term and mitigation procedures will include installation of erosion control devices, restoration, or replacement according to permitting process conditions. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Waterbodies and Water Resources

This potential routing option crosses 10 streams including Rutgers Creek, Indigot Creek and Joe Creek. Installation will be accomplished by either a “wet” or “dry” construction technique. The objective of these methods is to minimize turbidity in and siltation of the waterbody. Alternate “dry” crossing techniques may involve boring or horizontal directional drilling. Construction activities are short term and mitigation involves the minimization of turbidity and siltation through selection of the construction method according to nature of the characteristics of each specific waterbody crossing. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Groundwater

Groundwater would be encountered during construction activities.

A spill control plan will be in-place during construction to minimize potential impacts from fuel and lubricants. Shallow bedrock has been identified for a small portion of the routing option. If blasting of bedrock is necessary, a blasting plan will be in-place to support construction. The plan will include the identification of any nearby water wells and pre and post-blast surveys of those wells.

Soils

The soils along the Potential Routing Option 5 are a mix of silty loams, sandy loams, and gravelly loams with some rock outcrop (USDA, 2008). Common soils include Rhinebeck silt loam (identified as RbA on Table 1-5) and Mardin silt loam (identified as Ma on Table 1-5). Construction could result in temporary soil erosion, loss of soil productivity due to compaction, or damage to soil structure from heavy equipment. Erosion potential may increase due to potential clearing, grading, trenching, and backfilling. Soil structural damage and compaction could result from construction activities during excessively wet periods. Mitigation measures can include implementation of a Project-specific SWPPP and Project-specific SPCC Plan developed prior to construction.

Vegetation

Routing is primarily along a portion of an existing abandoned railroad corridor or a power line corridor and then portions where existing corridors are not present. Land Use along this routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, commercial, and highway. Construction activities are short term and some areas disturbed will revert to similar vegetation types previous to installation while other sections may have habitat fragmentation where vegetation occurs. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Cultural Resources

This routing option does not cross any cultural resource areas along the route.

Land Use

Routing is primarily along a portion of an existing abandoned railroad corridor or a power line corridor and then portions where existing corridors are not present. Land Use along this potential routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, commercial, and highway. Construction activities are short term and areas that were disturbed may have similar land use type and some areas become a permanent right-of-way. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Potential Routing Option 6

Wildlife Habitat

Routing is primarily along an existing abandoned railroad corridor or a power line corridor and then parallels the Millennium Pipeline to a proposed meter site. Land Use along this potential routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, and commercial. Construction activities are short term and some areas disturbed will revert to similar habitat types previous to installation while other sections may have habitat fragmentation. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Wetlands

Routing crosses 452 feet of DEC wetlands and approximately 8,727 feet of federal wetlands. Construction across wetlands will typically be accomplished using conventional pipeline construction techniques/procedures that may reduce construction right-of-way. Construction activities are short term and mitigation procedures will include installation of erosion control devices, restoration, or replacement according to permitting process conditions. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Waterbodies and Water Resources

This potential routing option crosses nine streams including Rutgers Creek, Indigot Creek, Catlin Creek and four unnamed streams. Installation will be accomplished by either a “wet” or “dry” construction technique. The objective of these methods is to minimize turbidity in and siltation of the waterbody. Alternate “dry” crossing techniques may involve boring or horizontal directional drilling. Construction activities are short term and mitigation involves the minimization of turbidity and siltation through selection of the construction method according to nature of the characteristics of each specific waterbody crossing. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Groundwater

Groundwater would be encountered during construction activities.

A spill control plan will be in-place during construction to minimize potential impacts from fuel and lubricants. Shallow bedrock has been identified for a small portion of the routing option. If blasting of bedrock is necessary, a blasting plan will be in-place to support construction. The plan will include the identification of any nearby water wells and pre and post-blast surveys of those wells.

Soils

The soils along the Potential Routing Option 6 are a mix of silty loams, sandy loams, and gravelly loams with some stony soils and rock outcrop (USDA, 2008). Common soils include Madalin silt loam (identified as Ma on Table 1-5), Rhinebeck silt loam (identified as RbA on Table 1-5) and Erie gravelly silt loam (identified as ErB on Table 17-6). Construction could result in temporary soil erosion, loss of soil productivity due to compaction, or damage to soil structure from heavy equipment. Erosion potential may increase due to potential clearing, grading, trenching, and backfilling. Soil structural damage and compaction could result from construction activities during excessively wet periods. Mitigation measures can include implementation of a Project-specific SWPPP and Project-specific SPCC Plan developed prior to construction.

Vegetation

Routing is primarily along an existing abandoned railroad corridor or a power line corridor and then parallels the Millennium Pipeline to a proposed meter site. Land Use along this potential routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, and commercial. Construction activities are short term and some areas disturbed will revert to similar vegetation types previous to installation while other sections may have habitat fragmentation where vegetation occurs. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

Cultural Resources

This potential routing option does not cross any cultural resource areas along the route.

Land Use

Routing is primarily along an existing abandoned railroad corridor or a power line corridor and then parallels the Millennium Pipeline to a proposed meter site. Land Use along this potential routing option has been noted as mainly open/agricultural, residential and forested, with other areas that have land use such as open vacant, industrial, and commercial. Construction activities are short term and areas that were disturbed may have similar land use type and some areas

become a permanent right-of-way. Operational impacts are anticipated to be limited to work during periodic maintenance and repair.

3.0 REFERENCE

U. S. Department of Agriculture (USDA). 2008. Web Soil Survey, Orange County New York. <http://websoilsurvey.nrcs.usda.gov/app/>. Accessed October 2008.