

**Wetland Bog Turtle Assessment Summary for the Pennsylvania Pipeline Project (PPP) – Lancaster County – 11/20/2016**

Wetland ID	USFWS Cowardin Classification <sup>1</sup>	Coordinates	Crossing Method <sup>2</sup>	Length of Centerline Crossing (feet) <sup>3</sup>	PADEP Permanent Disturbance <sup>4</sup>	PADEP Temporary Disturbance <sup>5</sup>	PADEP & USACE Permanent Loss <sup>6</sup>	Conversion Impact (acre) <sup>7</sup>	Bog Turtle Assessment <sup>8</sup>		Exceptional Value	Site Plan Sheet Number	Permit
									Phase I	Phase II			
W8c	PEM	40.2842, -76.1815	Open Cut	7	0.007	-	-	-	1N	N/A	-	11	Individual
A52	PEM	40.2834, -76.1618	Open Cut	45	0.050	-	-	-	1P	2N	BT Adj	16	Individual
A54	PEM	40.2838, -76.1680	HDD	905	0.062	-	-	-	1P	2P	BT A/O	15	Individual
	PFO	40.2838, -76.1702	HDD	92	0.006	-	-	-	1P	2P	BT A/O	15	Individual
A55	PEM	40.2842, -76.1756	HDD	788	0.054	-	-	-	1P	2N	BT A/O	12	Individual
A56	PEM	40.2826, -76.1581	Bore	300	0.021	0.172	-	-	1P	2N	BT Adj	17	Individual
B5	PEM	40.2839, -76.1408	HDD	168	0.195	-	-	-	1P	2N	-	21	Individual
B7	PEM	40.2833, -76.1260	Open Cut	66	0.064	-	-	-	1N	N/A	-	24	Individual
B10	PEM	40.2835, -76.1173	Open Cut	128	0.133	-	-	-	1N	N/A	-	26	Individual
B11	PEM	40.2838, -76.1111	Open Cut	69	0.069	-	-	-	1P	2N	-	27	Individual
B72	PEM	40.2819, -76.1526	Bore / Temporary Matting	309	0.021	0.037	-	-	1N	N/A	-	18	Individual
B74	PEM	40.2828, -76.1468	Open Cut	346	0.556	-	-	-	1P	2N	-	19	Individual
H28	PEM	40.2836, -76.1832	Open Cut	44	0.049	-	-	-	1N	N/A	-	11	Individual
J54	PFO	40.2801, -76.1947	Bore	166	0.011	-	-	-	1N	N/A	-	8	Individual
K32	PEM	40.2805, -76.2080	HDD	632	0.043	-	-	-	1P	2N	BT Adj	5	Individual
			<b>14 Wetlands</b>	<b>4,065 feet 0.770 miles</b>	<b>1.341 acres</b>	<b>0.209 acre</b>	<b>0 acre</b>	<b>0 acre</b>					

Notes:

- <sup>1</sup> Field classification based on Cowardin et al. 1979. PEM = palustrine emergent wetland, PSS = palustrine scrub-shrub wetland, PFO = palustrine forested wetland.
- <sup>2</sup> Typical of crossing procedures and methods can be found in Attachment 12 (Erosion and Sediment Control Plan).
- <sup>3</sup> A zero length of centerline crossing indicates the wetland is located in the construction right-of-way but is not directly crossed by the pipeline centerline.
- <sup>4</sup> Permanent disturbances are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into the wetland. Permanent disturbance impacts as HDD crossings are calculated on the width of the borehole (3 feet) multiplied by the length of the wetland crossing.
- <sup>5</sup> Temporary disturbances are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This does not include areas that will be maintained as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into the wetland. These areas consist of additional temporary workspaces and temporary access roads.
- <sup>6</sup> Loss of wetland acreages due to permanent fill.
- <sup>7</sup> For PSS located in the permanent and temporary disturbance areas, these areas will be replanted with wetland shrubs in accordance with the wetland restoration and mitigation plan. PFO located in temporary disturbance areas will be replanted with wetland tree species in accordance with the wetland restoration and mitigation plan. PFO located in the permanent ROW will be restored to the wetland condition, however PFO habitat is expected to be permanently converted to PEM habitat in these areas.
- <sup>8</sup> Bog turtle assessment classification as follows; 1P = Phase I Positive, 1N = Phase I Negative, 2N = Phase II Negative, 2P = Phase II Positive, 2FWS = USFWS determined Phase II was not needed, O = occupied, Pending = access issues, still awaiting survey results.
- <sup>9</sup> Wetlands listed above are impacted by construction, a list of wetlands within the 300 ft survey corridor that are not impacted can be provided upon request.