

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

Wetland ID	USFWS Cowardin Classification ¹	Coordinates	Crossing Method ²	Length of Centerline Crossing (feet) ³	PADEP Permanent Disturbance ⁴	PADEP Temporary Disturbance ⁵	PADEP & USACE Permanent Loss ⁶	Conversion Impact (acre) ⁷	Bog Turtle Assessment ⁸		Exceptional Value	Site Plan Sheet Number	Permit
									Phase I	Phase II			
BA5	PFO	39.8466, -75.4103	HDD	6	0.001	-	-	-	1N	N/A	-	46	Individual
BA6	PFO	39.8465, -75.4107	HDD	26	0.002	-	-	-	1N	N/A	-	46	Individual
C10	PEM	39.9053, -75.4468	HDD	51	0.004	-	-	-	1N	N/A	PuWS	22	Individual
	PSS	39.9055, -75.4467	HDD	51	0.003	-	-	-	1N	N/A	PuWS	22	Individual
C21	PFO	39.9214, -75.4642	HDD	14	0.001	-	-	-	1N	N/A	-	16	Individual
C23	PEM	39.9107, -75.4566	Open Cut	243	0.276	-	-	-	1P	2N	Wild Trout	19	Individual
H41	PEM	39.8542, -75.3993	Open Cut	-	0.001	-	-	-	1N	N/A	-	42	Individual
I1	PEM	39.8945, -75.4320	HDD	200	0.014	-	-	-	1N	N/A	PuWS	27	Individual
I5	PEM	39.8460, -75.4139	Open Cut / Temporary Matting	113	0.129	0.830	-	-	1N	N/A	-	46	Individual
I16	PEM	39.8491, -75.4039	HDD	58	0.004	-	-	-	1N	N/A	-	44	Individual
	PFO	39.8485, -75.4035	HDD	295	0.020	-	-	-	1N	N/A	-	44	Individual
			9 Wetlands	1,057 feet 0.200 miles	0.455 acre	0.830 acre	0 acre	0 acre					

Notes:

- ¹ Field classification based on Cowardin et al. 1979. PEM = palustrine emergent wetland, PSS = palustrine scrub-shrub wetland, PFO = palustrine forested wetland.
- ² Typicals of crossing procedures and methods can be found in Attachment 12 (Erosion and Sediment Control Plan).
- ³ 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.
- ⁴ 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.
- ⁵ 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.
- ⁶ Loss of wetland acreages due to permanent fill.
- ⁷ 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.
- ⁸ 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, A = assumed occupied (access issues), Pending = awaiting survey results.
- ⁹ 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.