

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

| Wetland ID | USFWS Cowardin Classification ¹ | Coordinates | Crossing Method ² | Length of Centerline Crossing (feet) ³ | PADEP Permanent Impact ⁴ | PADEP Temporary Impact 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 | | | |
| W5c | PEM | 40.2861, -76.3149 | Open Cut | 64 | 0.057 | - | - | - | 1N | N/A | Wild Trout Trib | 60 | Individual |
| A11 | PEM | 40.2843, -76.4597 | Open Cut | 90 | 0.104 | - | - | - | 1P | 2N | - | 29 | Individual |
| A13 | PEM | 40.2904, -76.427 | Open Cut | 21 | 0.011 | - | - | - | 1N | N/A | - | 36 | Individual |
| A19 | PEM | 40.2869, -76.3601 | Open Cut | 27 | 0.028 | - | - | - | 1N | N/A | Wild Trout Trib | 51 | Individual |
| A1 | PEM | 40.2636, -76.5519 | Open Cut | 59 | 0.037 | - | - | - | 1N | N/A | - | 10 | Individual |
| A2 | PEM | 40.2637, -76.551 | Open Cut | 65 | 0.024 | - | - | - | 1N | 2N | - | 10 | Individual |
| A3 | PEM | 40.2651, -76.5438 | Open Cut | 13 | 0.006 | - | - | - | 1N | N/A | - | 11 | Individual |
| A6 | PEM | 40.2657, -76.5424 | Open Cut | 43 | 0.030 | - | - | - | 1N | N/A | - | 12 | Individual |
| A9 | PEM | 40.2696, -76.5246 | Open Cut | 99 | 0.059 | - | - | - | 1P | 2N | - | 16 | Individual |
| B66 | PEM | 40.2625, -76.5574 | Open Cut | 25 | 0.031 | - | - | - | 1P | 2N | - | 9 | Individual |
| BB154 | PEM | 40.2881, -76.3808 | Open Cut | - | 0.001 | - | - | - | 1P | 2N | - | 46 | Individual |
| C16 | PEM | 40.2850, -76.2533 | Open Cut | 253 | 0.218 | - | - | - | 1P | 2N | - | 74 | Individual |
| | PFO | 40.2851, -76.2528 | Open Cut | - | 0.029 | - | - | 0.001 | 1P | 2N | - | 74 | Individual |
| C17 | PEM | 40.2845, -76.2696 | Open Cut | 91 | 0.031 | - | - | - | 1N | N/A | - | 70 | Individual |
| | PFO | 40.2847, -76.2697 | Open Cut | 26 | 0.025 | - | - | 0.015 | 1N | N/A | - | 70 | Individual |
| CJ2 | PEM | 40.2868, -76.3300 | Bore / Travel Lane | 34 | 0.002 | 0.020 | - | - | 1N | N/A | Wild Trout | 57 | Individual |
| H13 | PEM | 40.2854, -76.2390 | HDD | 662 | 0.046 | - | - | - | 1P | 2N | - | 76 | Individual |
| H14 | PEM | 40.2854, -76.2415 | HDD | 441 | 0.030 | - | - | - | 1P | 2N | - | 76 | Individual |
| H4 | PEM | 40.2856, -76.2917 | Open Cut | 351 | 0.369 | - | - | - | 1P | 2N | Wild Trout Trib | 65 | Individual |
| J47 | PFO | 40.2533, -76.5931 | HDD | 158 | 0.011 | - | - | - | 1N | N/A | - | 1 | Individual |
| | | | 18 Wetlands | 2,522 feet 0.48 miles | 1.149 acres | 0.020 acre | 0 acre | 0.016 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.
- 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.