Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
W35	PEM	Berks	0.241 (P), 0.183 (T)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
W301	PEM	Berks	0.020 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
W302	PEM	Berks	0.058 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
A37	PEM	Berks	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
A45	PEM	Berks	0.123 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
A49	PEM	Berks	0.050 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
B16	PEM	Berks	0.007 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
B18	PEM	Berks	0.010 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
B27	PEM	Berks	0.059 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
B28	PEM	Berks	0.027 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
B29	PEM	Berks	0.180 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
B30	PEM	Berks	0.001 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
B31	PEM	Berks	0.005 (P)	None	X	Poor
B32	PEM	Berks	0.081 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
B33	PEM	Berks	0.019 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
B40	PEM	Berks	0.047 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
B48	PEM	Berks	0.035 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
BA10	PEM	Berks	0.017 (P)	None	X	Poor
BB42	PSS, PFO	Berks	0.010 (T)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, Wildlife Habitat, Educational/Scientific Value, Uniqueness/Heritage		Excellent
C1	PEM	Berks	0.101 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
C2	PEM	Berks	0.007 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
C5	PEM	Berks	0.079 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good
H23	PEM	Berks	0.013 (P)	None	X	Poor
J48	PEM, PFO	Berks	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Excellent
J71	PEM	Berks	0.003 (T)	None		Poor
K25	PEM	Berks	0.012 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
BB52	PEM	Blair	0.093 (P)	Sediment/Toxicant Retention, and Nutrient Removal		Poor
BB56	PEM	Blair	0.002 (P)	Sediment/Toxicant Retention, and Nutrient Removal		Poor
BB58	PEM	Blair	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
BB59	PEM	Blair	0.007 (P)	None		Poor
BB101	PEM	Blair	0.014 (T)	Groundwater Recharge/Discharge	X	Poor
BB103	PEM, PSS	Blair	0.012 (T)	Sediment/Toxicant Retention	X	Poor
BB108	PEM	Blair	0.012 (T)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal		Good
BB120	PEM, PSS	Blair	0.070 (T)	None		Poor
BB124	PEM, PSS	Blair	0.583 (T)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good
L35	PEM	Blair	0.001 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
L40	PEM	Blair	None (Bore)	None		Poor
L42	PEM	Blair	0.029 (P)	Groundwater Recharge/Discharge	X	Poor
L43	PEM	Blair	0.051 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
L44	PEM	Blair	0.042 (P)	Nutrient Removal	X	Poor
L61	PEM	Blair	0.044 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
M49	PEM, PFO	Blair	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export	X	Good
M50	PEM	Blair	0.001 (P)	None	X	Poor
M55	PEM	Blair	0.125 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
M56	PEM	Blair	0.022 (P)	None	X	Poor
M57	PEM	Blair	0.014 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
M79	PFO	Blair	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export		Good
Q51	PEM	Blair	0.017 (T)	None	X	Poor
Q52	PEM	Blair	0.008 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Fair
Q54	PEM	Blair	0.005 (P)	None		Poor
Q56	PEM	Blair	0.007 (P)	None		Poor
Q58	PEM	Blair	0.012 (P)	None		Poor
W14e	PEM	Cumberland	0.005 (P)	None	X	Poor
W177	PEM	Cumberland	0.287 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good
W19d	PEM	Cumberland	0.011 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good
W22d	PEM	Cumberland	0.005 (P)	None	X	Poor
W33d	PEM	Cumberland	0.016 (P)	Sediment/Toxicant Retention	X	Poor
BB15	PEM	Cumberland	0.021 (P)	Floodflow Alteration, Sediment/Toxicant Retention		Poor
BB43	PEM	Cumberland	0.009 (P)	None		Poor
BB44	PEM	Cumberland	0.001 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Fair
BB129	PEM	Cumberland	0.146 (P)	Floodflow Alteration	X	Poor
BB151	PEM	Cumberland	0.020 (T)	None		Poor

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
BB155	PEM, PSS, PFO	Cumberland	0.132 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export		Good
H54	PEM	Cumberland	0.020 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
I26	PEM	Cumberland	0.070 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
I27	PEM	Cumberland	0.039 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
I38	PEM, PFO	Cumberland	0.033 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
I39	PEM	Cumberland	0.097 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
I41	PEM	Cumberland	0.049 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
I42	PSS	Cumberland	0.001 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Fair
I43	PEM	Cumberland	0.038 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
I44	PEM	Cumberland	0.024 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
I45	PEM	Cumberland	0.019 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
I46	PEM	Cumberland	0.025 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
I48	PEM	Cumberland	0.023 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
I49	PEM	Cumberland	0.037 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Fair
I52	PEM	Cumberland	0.011 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
I53	PEM	Cumberland	0.041 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
I54	PEM	Cumberland	0.005 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
I55	PEM	Cumberland	0.029 (P)	Sediment/Toxicant Retention	X	Poor
I56	PEM	Cumberland	0.002 (P)	None	X	Poor
I58	PEM	Cumberland	0.024 (P)	None	X	Poor
I60	PEM	Cumberland	0.052 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
I61	PEM	Cumberland	0.048 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
I62	PEM	Cumberland	0.121 (P)	Sediment/Toxicant Retention	X	Poor
I63	PEM	Cumberland	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
I64	PEM	Cumberland	0.009 (P)	Sediment/Toxicant Retention	X	Poor
J9	PEM	Cumberland	None (HDD)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
J10	PEM	Cumberland	1.481 (P), 0.491 (T)	Sediment/Toxicant Retention, and Nutrient Removal		Poor
J11	PEM	Cumberland	0.217 (T)	Sediment/Toxicant Retention, and Nutrient Removal		Poor
J13	PEM	Cumberland	0.093 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
J14	PEM	Cumberland	0.027 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Fair
J15	PEM	Cumberland	0.032 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Good
J20	PEM	Cumberland	0.332 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
J21	PEM	Cumberland	0.108 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
J22	PEM	Cumberland	0.075 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
J23	PEM	Cumberland	0.107 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
J24	PEM	Cumberland	0.042 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
J25	PEM	Cumberland	0.066 (P)	None	X	Poor
J26	PEM	Cumberland	0.021 (P)	None	X	Poor
J27	PEM	Cumberland	0.015 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
J31	PEM	Cumberland	0.198 (P) Travel Only	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
J32	PEM	Cumberland	0.035 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Fair
J35	PEM	Cumberland	1.230 (P) Travel Only	Groundwater Recharge/Discharge, Floodflow Alteration, Fish and Shellfish Habitat, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Excellent
J36	PEM	Cumberland	0.116 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
J40	PEM	Cumberland	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Good
K1	PEM	Cumberland	0.182 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
K2	PEM	Cumberland	0.001 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal		Fair
K3	PEM	Cumberland	0.019 (P)	Floodflow Alteration, Sediment/Toxicant Retention, and Nutrient Removal	X	Fair
K5	PEM	Cumberland	0.034 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
K6	PEM	Cumberland	0.053 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
K7	PEM	Cumberland	0.059 (P)	None	X	Poor
K9	PEM	Cumberland	0.014 (P)	None	X	Poor
K11	PEM	Cumberland	0.010 (P)	Sediment/Toxicant Retention	X	Poor
K12	PEM	Cumberland	0.004 (P)	None	X	Poor
K13	PEM	Cumberland	0.005 (P)	None	X	Poor
K14	PEM	Cumberland	0.001 (P)	None	X	Poor
K15	PEM	Cumberland	0.026 (P)	Sediment/Toxicant Retention	X	Poor
K16	PEM	Cumberland	0.027 (P)	Sediment/Toxicant Retention	X	Poor
K35	PEM	Cumberland	0.006 (P)	Groundwater Recharge/Discharge	X	Poor

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
K41	PEM	Cumberland	0.010 (P)	None		Poor
K44	PEM, PFO	Cumberland	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Good
A16	PEM	Dauphin	0.022 (P)	Sediment/Toxicant Retention	X	Poor
A17	PEM	Dauphin	0.039 (P)	Sediment/Toxicant Retention	X	Poor
A18	PFO	Dauphin	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Good
A22	PEM	Dauphin	0.002 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention		Fair
A23	PEM	Dauphin	0.232 (P)	Sediment/Toxicant Retention, and Nutrient Removal	X	Poor
A25	PEM	Dauphin	0.133 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
A27	PEM	Dauphin	0.002 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
B55	PEM	Dauphin	0.012 (P)	None	X	Poor
B56	PEM	Dauphin	0.003 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
B57	PEM	Dauphin	0.036 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
B58	PEM, PFO	Dauphin	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Good
B59	PEM	Dauphin	0.066 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
B60	PEM	Dauphin	0.028 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
B61	PEM, PFO	Dauphin	0.197 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Good
B64	PFO	Dauphin	0.042 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
B76	PSS	Dauphin	0.059 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
BB36	PEM	Dauphin	0.024 (T)	None		Poor
BB39	PEM	Dauphin	0.016 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
BB41	PEM	Dauphin	0.015 (T)	None		Poor
C26	PEM, PFO	Dauphin	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
C27	PEM, PSS	Dauphin	0.099 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
C28	PEM	Dauphin	0.268 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
CC22	PEM	Dauphin	None (HDD)	None	X	Poor
J47	PEM, PFO	Dauphin	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
K23	PEM	Dauphin	0.006 (P)	None	X	Poor
W332	PEM	Huntingdon	0.024 (P)	None	X	Poor
W333	PEM	Huntingdon	0.006 (P)	None	X	Poor
W46b	PEM, PSS	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Good
BB127	PEM, PSS, PFO	Huntingdon	0.033 (P)	Sediment/Toxicant Retention		Poor

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Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
CC27	PEM	Huntingdon	0.049 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Fair
CC28	PFO	Huntingdon	0.042 (P)	Sediment/Toxicant Retention, Wildlife Habitat		Good
K63	PEM	Huntingdon	0.012 (P)	None	X	Poor
K65	PEM	Huntingdon	0.003 (P)	None	X	Poor
K66	PEM	Huntingdon	0.059 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Fair
K67	PEM	Huntingdon	0.206 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
K68	PEM, PSS, PFO	Huntingdon	0.365 (P) PEM Travel Only	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
K69	PEM, PSS	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
K70	PFO	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
K72	PEM	Huntingdon	0.002 (P)	None	X	Poor
L5	PEM	Huntingdon	0.115 (P)	None	X	Poor
L6	PEM	Huntingdon	0.094 (P)	None	X	Poor
L7	PEM	Huntingdon	0.001 (P)	Sediment/Toxicant Retention	X	Poor
L8	PEM	Huntingdon	0.141 (P)	None	X	Poor
L9	PEM	Huntingdon	0.068 (P)	None	X	Poor
L10	PEM	Huntingdon	0.063 (P)	None	X	Poor
L11	PEM	Huntingdon	0.020 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
L12	PEM	Huntingdon	0.081 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
L13	PEM	Huntingdon	0.060 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
L14	PEM	Huntingdon	0.035 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
L15	PEM	Huntingdon	0.024 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
L16	PEM	Huntingdon	0.049 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
L17	PEM	Huntingdon	0.024 (P)	None	X	Poor
L18	PEM	Huntingdon	0.004 (P)	None	X	Poor
L20	PEM	Huntingdon	0.014 (P)	None	X	Poor
L21	PEM	Huntingdon	0.016 (P)	None	X	Poor
L24	PEM	Huntingdon	0.027 (P)	Groundwater Recharge/Discharge		Poor
L27	PEM	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
L28	PEM	Huntingdon	0.058 (P)	None	X	Poor
L29	PEM	Huntingdon	0.002 (P)	Sediment/Toxicant Retention	X	Poor
L31	PEM	Huntingdon	0.001 (P)	Sediment/Toxicant Retention		Poor
L32	PEM	Huntingdon	0.094 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
L33a [L33]	PEM	Huntingdon	0.006 (P)	Sediment/Toxicant Retention		Poor
L36	PSS	Huntingdon	0.030 (P)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Fair
M1	PEM	Huntingdon	0.070 (P)	Floodflow Alteration, Sediment/Toxicant Retention	X	Poor
M2	PEM	Huntingdon	0.010 (P)	Floodflow Alteration, Sediment/Toxicant Retention	X	Poor
M3	PEM, PSS	Huntingdon	0.019 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
M6	PEM	Huntingdon	0.013 (P)	None	X	Poor
M7	PEM	Huntingdon	0.045 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
M8	PEM	Huntingdon	0.008 (P)	None	X	Poor

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Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
M9	PEM	Huntingdon	0.022 (P)	Sediment/Toxicant Retention	X	Poor
M10	PEM	Huntingdon	0.007 (P)	Floodflow Alteration, Sediment/Toxicant Retention	X	Poor
M12	PEM	Huntingdon	0.007 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
M13	PEM	Huntingdon	0.014 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
M15	PEM	Huntingdon	0.069 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
M17	PEM	Huntingdon	0.102 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
Y1	PFO	Huntingdon	None (HDD)	None	X	Poor
Y2	PSS	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
Y3	PSS	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
Y4	PFO	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
Y6	PFO	Huntingdon	None (HDD)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
Y7	PEM, PFO	Huntingdon	0.196 (P) PEM Travel Only	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
Y12	PEM	Huntingdon	0.603 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
Y13	PEM	Huntingdon	0.004 (P)	None	X	Poor
Y14	PEM	Huntingdon	0.037 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
K58	PEM	Juniata	0.065 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
K59	PEM	Juniata	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention	X	Fair
K60	PFO	Juniata	None (HDD)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
L3	PEM	Juniata	0.007 (P)	None	X	Poor
Q64	PEM	Juniata	0.075 (P), 0.099 (T)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
W8c	PEM	Lancaster	0.007 (P)	None		Poor
B5	PEM	Lancaster	0.195 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal		Fair
B7	PEM	Lancaster	0.064 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal		Fair
B10	PEM	Lancaster	0.133 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal		Fair
B11	PEM	Lancaster	0.069 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
B72	PEM	Lancaster	0.249 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Good
B74	PEM	Lancaster	0.556 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal		Fair
H28	PEM	Lancaster	0.049 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
J54	PFO	Lancaster	None (Bore)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Good
K32	PEM	Lancaster	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal		Good
W5c	PEM	Lebanon	0.057 (P)	Sediment/Toxicant Retention, Nutrient Removal		Poor
A1	PEM	Lebanon	0.037 (P)	None	X	Poor
A2	PEM	Lebanon	0.024 (P)	None	X	Poor

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
A3	PEM	Lebanon	0.006 (P)	None	X	Poor
A4	PEM	Lebanon	0.001 (P)	None	X	Poor
A6	PEM	Lebanon	0.030 (P)	None	X	Poor
A9	PEM	Lebanon	0.059 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
A11	PEM	Lebanon	0.104 (P)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
A13	PEM	Lebanon	0.011 (P)	None	X	Poor
B66	PEM	Lebanon	0.031 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
BB154	PEM	Lebanon	0.007 (P)	None	X	Poor
C16	PEM, PFO	Lebanon	0.247 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
C17	PEM	Lebanon	0.031 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor
H13	PEM, PSS, PFO	Lebanon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Excellent
H14	PEM, PFO	Lebanon	None (HDD)	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal, Production Export, and Wildlife Habitat	X	Excellent
W36d	PEM	Perry	0.013 (P)	None	X	Poor
K50	PEM	Perry	0.151 (P)	Sediment/Toxicant Retention	X	Poor
K52	PEM, PSS	Perry	0.024 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor
K53	PEM	Perry	0.003 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor
K55	PEM	Perry	0.091 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor
W3c	PEM	York	0.010 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor
BB1	PEM	York	None (HDD)	Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
BB21	PEM	York	0.009 (P)	Sediment/Toxicant Retention	X	Poor
BB152	PEM	York	0.024 (P)	Floodflow Alteration, Sediment/Toxicant Retention	X	Poor
H50	PEM	York	0.028 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention, Nutrient Removal	X	Fair
H51	PEM, PFO	York	0.169 (P), 0.032 (T) PEM Travel Only	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal	X	Good
I20	PEM	York	0.011 (P)	Sediment/Toxicant Retention, Nutrient Removal	X	Poor
I22	PEM	York	0.096 (P)	None	X	Poor
I23	PEM	York	0.021 (P)	None	X	Ppor
J63	PFO	York	0.004 (P)	Groundwater Recharge/Discharge, Sediment/Toxicant Retention	X	Poor

Generalized Assessment of Quality[3]

Excellent	Many to All Functions and Values
Good	Several to Many Functions and Values
Fair	Few to Several Functions and Values

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
Poor	Few to No Functions and Values					

Footnotes:

[1]Cowardin classification only included for impacted portion of the wetland.	
[2]Wetland functions were determined using the Highway Method (USACE 1999)	
[3]Not a Highway Method category, assigned based on presence of principle functions given the presences absence of the consderations and qualifiers listed below, as well as best professional judgement.	
X	Part or all of the assessed wetland [complex] is located within an existing [maintained] right-of-way.

F&V	CONSIDERATIONS/QUALIFIERS
Groundwater Recharge/ Discharge	1. Public or private wells occur downstream of the wetland. 2. Potential exists for public or private wells downstream of the wetland. 3. Wetland is underlain by stratified drift. 4. Gravel or sandy soils present in or adjacent to the wetland. 5. Fragipan does not occur in the wetland. 6. Fragipan, impervious soils, or bedrock does occur in the wetland. 7. Wetland is associated with a perennial or intermittent watercourse. 8. Signs of groundwater recharge are present or piezometer data demonstrates recharge. 9. Wetland is associated with a watercourse but lacks a defined outlet or contains a constricted outlet. 10. Wetland contains only an outlet, no inlet. 11. Groundwater quality of stratified drift aquifer within or downstream of wetland meets drinking water standards. 12. Quality of water associated with the wetland is high. 13. Signs of groundwater discharge are present (e.g., springs). 14. Water temperature suggests it is a discharge site. 15. Wetland shows signs of variable water levels. 16. Other
Floodflow Alteration	1. Area of this wetland is large relative to its watershed. 2. Wetland occurs in the upper portions of its watershed. 3. Effective flood storage is small or non-existent upslope of or above the wetland. 4. Wetland watershed contains a high percent of impervious surfaces. 5. Wetland contains hydric soils which are able to absorb and detain water. 6. Wetland exists in a relatively flat area that has flood storage potential. 7. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level. 8. During flood events, this wetland can retain higher volumes of water than under normal or average rainfall conditions. 9. Wetland receives and retains overland or sheet flow runoff from surrounding uplands. 10. In the event of a large storm, this wetland may receive and detain excessive flood water from a nearby watercourse. 11. Valuable properties, structures, or resources are located in or near the floodplain downstream from the wetland. 12. The watershed has a history of economic loss due to flooding. 13. This wetland is associated with one or more watercourses. 14. This wetland watercourse is sinuous or diffuse. 15. This wetland outlet is constricted. 16. Channel flow velocity is affected by this wetland. 17. Land uses downstream are protected by this wetland. 18. This wetland contains a high density of vegetation. 19. Other
	1. Forest land dominant in the watershed above this wetland. 2. Abundance of cover objects present. STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE 3. Size of this wetland is able to support large fish/shellfish populations. 4. Wetland is part of a larger, contiguous watercourse.

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
Fish and Shellfish Habitat	5. Wetland has sufficient size and depth in open water areas so as not to freeze solid and retain some open water during winter. 6. Stream width (bank to bank) is more than 50 feet. 7. Quality of the watercourse associated with this wetland is able to support healthy fish/shellfish populations. 8. Streamside vegetation provides shade for the watercourse. 9. Spawning areas are present (submerged vegetation or gravel beds). 10. Food is available to fish/shellfish populations within this wetland. 11. Barrier(s) to anadromous fish (such as dams, including beaver dams, waterfalls, road crossing) are absent from the stream reach associated with this wetland. 12. Evidence of fish is present. 13. Wetland is stocked with fish. 14. The watercourse is persistent. 15. Man-made streams are absent. 16. Water velocities are not too excessive for fish usage. 17. Defined stream channel is present. 18. Other					
Sediment/ Toxicant/ Pathogen Retention	1. Potential sources of excess sediment are in the watershed above the wetland. 2. Potential or known sources of toxicants are in the watershed above the wetland. 3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland. 4. Fine grained mineral or organic soils are present. 5. Long duration water retention time is present in this wetland. 6. Public or private water sources occur downstream. 7. The wetland edge is broad and intermittently aerobic. 8. The wetland is known to have existed for more than 50 years. 9. Drainage ditches have not been constructed in the wetland. STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE. 10. Wetland is associated with an intermittent or perennial stream or a lake. 11. Channelized flows have visible velocity decreases in the wetland. 12. Effective floodwater storage in wetland is occurring. Areas of impounded open water are present. 13. No indicators of erosive forces are present. No high water velocities are present. 14. Diffuse water flows are present in the wetland. 15. Wetland has a high degree of water and vegetation interspersion. 16. Dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation by dense vegetation is present. 17. Other					
Nutrient Removal/ Retention/ Transformation	1. Wetland is large relative to the size of its watershed. 2. Deep water or open water habitat exists. 3. Overall potential for sediment trapping exists in the wetland. 4. Potential sources of excess nutrients are present in the watershed above the wetland. 5. Wetland saturated for most of the season. Ponded water is present in the wetland. 6. Deep organic/sediment deposits are present. 7. Slowly drained fine grained mineral or organic soils are present. 8. Dense vegetation is present. 9. Emergent vegetation and/or dense woody stems are dominant. 10. Opportunity for nutrient attenuation exists. 11. Vegetation diversity/abundance sufficient to utilize nutrients. STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE. 12. Waterflow through this wetland is diffuse. 13. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation. 14. Water moves slowly through this wetland. 15. Other					
	1. Wildlife food sources grow within this wetland.					

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
Production Export (Nutrient)	2. Detritus development is present within this wetland 3. Economically or commercially used products found in this wetland. 4. Evidence of wildlife use found within this wetland. 5. Higher trophic level consumers are utilizing this wetland. 6. Fish or shellfish develop or occur in this wetland. 7. High vegetation density is present. 8. Wetland exhibits high degree of plant community structure/species diversity. 9. High aquatic vegetative diversity/abundance is present. 10. Nutrients exported in wetland watercourses (permanent outlet present). 11. “Flushing” of relatively large amounts of organic plant material occurs from this wetland. 12. Wetland contains flowering plants that are used by nectar-gathering insects. 13. Indications of export are present. 14. High production levels occurring, however, no visible signs of export (assumes export is attenuated). 15. Other					
Sediment/ Shoreline Stabilization	1. Indications of erosion or siltation are present. 2. Topographical gradient is present in wetland. 3. Potential sediment sources are present up-slope. 4. Potential sediment sources are present upstream. 5. No distinct shoreline or bank is evident between the waterbody and the wetland or upland. 6. A distinct step between the open waterbody or stream and the adjacent land exists (i.e., sharp bank) with dense roots throughout. 7. Wide wetland (>10’) borders watercourse, lake, or pond. 8. High flow velocities in the wetland. 9. The watershed is of sufficient size to produce channelized flow. 10. Open water fetch is present. 11. Boating activity is present. 12. Dense vegetation is bordering watercourse, lake, or pond. 13. High percentage of energy-absorbing emergents and/or shrubs border a watercourse, lake, or pond. 14. Vegetation is comprised of large trees and shrubs that withstand major flood events or erosive incidents 15. Vegetation is comprised of a dense resilient herbaceous layer that stabilizes sediments and the shoreline on a small scale (inches) 16. Other					
Wildlife Habitat	1. Wetland is not degraded by human activity. 2. Water quality of the watercourse, pond, or lake associated with this wetland meets or exceeds Class A or B standards. 3. Wetland is not fragmented by development. 4. Upland surrounding this wetland is undeveloped. 5. More than 40% of this wetland edge is bordered by upland wildlife habitat at least 500 feet in width. 6. Wetland is contiguous with other wetland systems connected by a watercourse or lake. 7. Wildlife overland access to other wetlands is present. 8. Wildlife food sources are within this wetland or are nearby. 9. Wetland exhibits a high degree of interspersion of vegetation classes and/or open water. 10. Two or more islands or inclusions of upland within the wetland are present. 11. Dominant wetland class includes deep or shallow marsh or wooded swamp. 12. More than three acres of shallow permanent open water (less than 6.6 feet deep), including streams in or adjacent to wetland, are present. 13. Density of the wetland vegetation is high. 14. Wetland exhibits a high degree of plant species diversity. 15. Wetland exhibits a high degree of diversity in plant community structure (e.g., tree/ shrub/vine/grasses/mosses) 16. Plant/animal indicator species are present. (List species for project) 17. Animal signs observed (tracks, scats, nesting areas, etc.) 18. Seasonal uses vary for wildlife and wetland appears to support varied population diversity/abundance during different seasons. 19. Wetland contains or has potential to contain a high population of insects. 20. Wetland contains or has potential to contain large amphibian populations.					

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
	21. Wetland has a high avian utilization or it's potential. 22. Indications of less disturbance-tolerant species are present. 23. Signs of wildlife habitat enhancement are present (birdhouses, nesting boxes, food sources,					
Recreation	1. Wetland is part of a recreation area, park, forest, or refuge. 2. Fishing is available within or from the wetland. 3. Hunting is permitted in the wetland. 4. Hiking occurs or has potential to occur within the wetland. 5. Wetland is a valuable wildlife habitat. 6. The watercourse, pond, or lake associated with the wetland is unpolluted. 7. High visual/aesthetic quality of this potential recreation site. 8. Access to water is available at this potential recreation site for boating, canoeing, or fishing. 9. The watercourse associated with this wetland is wide and deep enough to accommodate canoeing and/or non-powered boating. 10. Off-road public parking available at the potential recreation site. 11. Accessibility and travel ease is present at this site. 12. The wetland is within a short drive or safe walk from highly populated public and private areas. 13. Other					
Education/ Scientific Value	1. Wetland contains or is known to contain threatened, rare, or endangered species. 2. Little or no disturbance is occurring in this wetland. 3. Potential educational site contains a diversity of wetland classes which are accessible or potentially accessible. 4. Potential educational site is undisturbed and natural. 5. Wetland is considered to be a valuable wildlife habitat. 6. Wetland is located within a nature preserve or wildlife management area. 7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.). 8. Off-road parking at potential educational site suitable for school bus access in or near wetland. 9. Potential educational site is within safe walking distance or a short drive to schools. 10. Potential educational site is within safe walking distance to other plant communities. 11. Direct access to perennial stream at potential educational site is available. 12. Direct access to pond or lake at potential educational site is available. 13. No known safety hazards exist within the potential educational site. 14. Public access to the potential educational site is controlled. 15. Handicap accessibility is available. 16. Site is currently used for educational or scientific purposes. 17. Other					
Uniquenes s/Heritage	1. Upland surrounding wetland is primarily urban. 2. Upland surrounding wetland is developing rapidly. 3. More than 3 acres of shallow permanent open water (less than 6.6 feet deep), including streams, occur in wetlands. 4. Three or more wetland classes are present. 5. Deep and/or shallow marsh or wooded swamp dominate. 6. High degree of interspersion of vegetation and/or open water occur in this wetland. 7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland. 8. Potential educational site is within a short drive or a safe walk from schools. 9. Off-road parking at potential educational site is suitable for school buses. 10. No known safety hazards exist within this potential educational site. 11. Direct access to perennial stream or lake exists at potential educational site. 12. Two or more wetland classes are visible from primary viewing locations. 13. Low-growing wetlands (marshes, scrub-shrub, bogs, and open water) are visible from primary viewing locations. 14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations. 15. Large area of wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons. 16. General appearance of the wetland visible from primary viewing locations is unpolluted and/or undisturbed. 17. Overall view of the wetland is available from the surrounding upland.					

Pennsylvania Pipeline Project Other Wetland Function and Value Assessment

Wetland	Cowardin[1]	County	Surface Impact Level (P-Perm ROW, T-Temp Workspaces)	Provided Principal Functions[2]	Within Existing ROW	Assessed Quality[3]
	18. Quality of the water associated with the wetland is high. 19. Opportunities for wildlife observations are available. 20. Historical buildings are found within the wetland. 21. Presence of pond or pond site and remains of a dam occur within the wetland. 22. Wetland is within 50 yards of the nearest perennial watercourse. 23. Visible stone or earthen foundations, berms, dams, standing structures, or associated features occur within the wetland. 24. Wetland contains critical habitat for a state- or federally-listed threatened or endangered species. 25. Wetland is known to be a study site for scientific research. 26. Wetland is a natural landmark or recognized by the state natural heritage inventory authority as an exemplary natural community. 27. Wetland has local significance because it serves several functional values. 28. Wetland has local significance because it has biological, geological, or other features that are locally rare or unique. 29. Wetland is known to contain an important archaeological site. 30. Wetland is hydrologically connected to a state or federally designated scenic river. 31. Wetland is located in an area experiencing a high wetland loss rate. 32. Other					
Visual Quality/Aesthetics	1. Multiple wetland classes are visible from primary viewing locations. 2. Emergent marsh and/or open water are visible from primary viewing locations. 3. A diversity of vegetative species is visible from primary viewing locations. 4. Wetland is dominated by flowering plants or plants that turn vibrant colors in different seasons. 5. Land use surrounding the wetland is undeveloped as seen from primary viewing locations. 6. Visible surrounding land use form contrasts with wetland. 7. Wetland views absent of trash, debris, and signs of disturbance. 8. Wetland is considered to be a valuable wildlife habitat. 9. Wetland is easily accessed. 10. Low noise level at primary viewing locations. 11. Unpleasant odors absent at primary viewing locations. 12. Relatively unobstructed sight line exists through wetland. 13. Other					
Endangered Species Habitat	1. Wetland contains or is known to contain threatened or endangered species. 2. Wetland contains critical habitat for a state or federally listed threatened or endangered species.					