Aquatic Resources Impact Table
Wetland Resources
Northampton County

Identification			Location					Wetland Temporary Impacts			Wetland Permanent impacts			Crossing Information		
Wetland ID and Crossing Number[1]	State Wetland Classification[2]	Cowardin Classification[3]	Milepost[4]	Latitude	Longitude	Muncipality[5]	Quadrangle	Temporary Crossing Length (feet)[6]	Temporary Crossing Width (feet)[7]	Temporary Impact Area (acres)[8]	Permanent Crossing Length (feet)[9]	Permanent Crossing Width (feet)[10]	Permanent Impact Area (acres)[11]	Primary Pipeline Crossing Method[12]	Secondary Pipeline Crossing Method[12]	Temporary Equipment Crossing[12]
PennEast Mainline Pipeline																
040517_GM_1001_PFO	Other	PFO1	52.4R3	40.80472659	-75.47300308	Moore	Kunkletown	10	35	0.012	40	30	0.026	CL - Open Cut	-	Matted
040517_GM_1001_PEM	Other	PEM1	52.4R3	40.80467349	-75.47293006	Moore	Kunkletown	14	6	0.001	-	-	-	N/A - Workspace	-	Matted
040617_GM_1001_PFO	Exceptional (iii)	PFO1	52.5R3	40.80417161	-75.47303337	Moore	Kunkletown	93	18	0.032	51	30	0.028	CL - Open Cut	-	Matted
040617_GM_1001_PEM	Exceptional (iii)	PEM1	52.5R3	40.80403535	-75.47295201	Moore	Kunkletown	6	15	0.002	3	3	0.001	N/A - Workspace	-	Matted
052918_WA_004_PFO	Exceptional (ii, iii)	PFO1	52.5R3	40.80375655	-75.47303609	Moore	Kunkletown	82	30	0.039	70	20	0.032	CL - Open Cut	-	Matted
052918_WA_005_PEM	Exceptional (ii, iii)	PEM1	52.5R3	40.80298112	-75.47304117	Moore	Kunkletown	27	7	0.004	6	18	0.007	CL - Open Cut	-	Matted
052918_WA_003_PFO	Exceptional (ii, iii)	PFO1	52.5R3	40.8028695	-75.4730419	Moore	Kunkletown	105	45	0.068	87	30	0.050	CL - Open Cut	-	Matted
052918_WA_007_PUB	Exceptional (ii, iii)	PEM2	52.6R3	40.8023535	-75.47337511	Moore	Kunkletown	52	30	0.036	35	12	0.005	N/A - Workspace	-	Matted
052918_WA_008_PUB	Exceptional (ii, iii)	PEM2	52.6R3	40.80222262	-75.47332546	Moore	Kunkletown	37	15	0.012	17	19	0.010	CL - Bore	CL - Open Cut	Matted
080917_WA_003_PEM	Exceptional (ii, iii)	PEM1	52.7R3	40.80082331	-75.47395256	Moore	Kunkletown	40	33	0.017	13	30	0.008	CL - Open Cut	-	Matted
080917_WA_002_PEM - 1	Exceptional (i, iii)	PEM1	52.7R3	40.80056161	-75.47407144	Moore	Kunkletown	20	45	0.016	5	30	0.004	N/A - Workspace	-	Matted
080917_WA_002_PEM - 2	Exceptional (i, iii)	PEM1	52.7R3	40.80018987	-75.47430039	Moore	Kunkletown	112	25	0.038	22	30	0.009	CL - Open Cut	-	Matted
080917_WA_002_PEM - 3	Exceptional (i, iii)	PEM1	52.8R3	40.799863	-75.474397	Moore	Kunkletown	36	20	0.001	6	1	0.001	N/A - Workspace		N/A
080917_WA_002_PSS	Exceptional (i, iii)	PSS1	52.8R3	40.79965298	-75.47456578	Moore	Kunkletown	56	25	0.035	17	30	0.010	CL - Open Cut	-	Matted
110217_WA_001_PSS	Exceptional (i, iii)	PSS1	52.8R3	40.799562	-75.474498	Moore	Kunkletown	19	19	0.005	-	-	-	N/A - Workspace	-	N/A
110217_WA_005_PFO - 1	Exceptional (i, iii)	PFO1	52.9R3	40.79854388	-75.47498908	Moore	Kunkletown	69	33	0.042	55	30	0.028	CL - Open Cut	-	Matted
110217_WA_005_PFO - 2	Exceptional (i, iii)	PFO1	52.9R3	40.7980715	-75.47525983	Moore	Kunkletown	40	20	0.004	25	6	0.002	CL - Open Cut	-	Matted
110217_WA_005_PFO - 3	Exceptional (i, iii)	PFO1	52.9R3	40.79777756	-75.47540126	Moore	Kunkletown	88	20	0.003	18	4	0.001	N/A - Workspace	-	Matted
110217_WA_006_PEM	Exceptional (ii, iii)	PEM1	52.9R3	40.79766927	-75.4752163	Moore	Kunkletown	45	15	0.013	12	3	0.001	N/A - Workspace	-	Matted
110217_WA_007_PEM	Exceptional (ii, iii)	PEM1	52.9R3	40.797565	-75.47511	Moore	Kunkletown	2	0.5	0.001	-	-	-	N/A - Workspace	-	N/A
110217_WA_008_PEM	Other	PEM1	53.1R3	40.79564453	-75.47625445	Moore	Kunkletown	37	10	0.008	7	19	0.006	CL - Bore	CL - Open Cut	Matted

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080917_WA_001_PEM - 1	Exceptional (iii)	PEM1	53.2R3	40.79381857	-75.4761838	Moore	Kunkletown	74	34	0.023	10	30	0.010	CL - Open Cut	-	Matted
080917_WA_001_PEM - 2	Exceptional (iii)	PEM1	53.3R3	40.7927002	-75.47597505	Moore	Kunkletown	263	45	0.137	154	30	0.097	CL - Open Cut	-	Matted
050217_MB_1002_PEM	Exceptional (iii)	PEM1	53.3R3	40.79209407	-75.47610778	Moore	Kunkletown	17	15	0.005	12	26	0.006	CL - Open Cut	-	Matted
050217_MB_1004_PFO	Exceptional (iii)	PFO1	53.4R3	40.79139651	-75.47616087	Moore	Kunkletown	9	10	0.002	7	6	0.001	N/A - Workspace	-	Matted
050217_MB_1001_PEM	Exceptional (iii)	PEM1	53.4R3	40.7909662	-75.47584625	Moore	Kunkletown	50	39	0.040	44	30	0.029	CL - Open Cut	-	Matted
081815_MK_042_PEM - 1	Exceptional (iii)	PEM1	55.9	40.7800697	-75.45707024	Moore	Kunkletown	109	45	0.071	54	30	0.037	CL - Bore	CL - Open Cut	Matted
062218_WA_001_PFO	Exceptional (iii)	PFO1	56	40.77982815	-75.45699334	Moore	Kunkletown	422	90	0.487	340	30	0.223	CL - Open Cut	-	Matted
062218_WA_001_PEM - 1	Exceptional (iii)	PEM1	56	40.77973169	-75.45676259	Moore	Kunkletown	96	68	0.132	-	-	-	N/A - Workspace	-	Matted
062218_WA_001_PEM - 2	Exceptional (iii)	PEM1	56	40.77937778	-75.4564478	Moore	Kunkletown	19	34	0.009	-	-	-	N/A - Workspace	-	Matted
052218_WA_002_PEM	Exceptional (iii)	PEM1	56.6	40.77259988	-75.44881716	Moore	Kunkletown	62	8	0.007	-	-	-	N/A - Workspace	-	Matted
101717_AB_1001_PEM	Exceptional (iii)	PEM1	56.6	40.77246449	-75.44898372	Moore	Kunkletown	1	8	0.001	-	-	-	N/A - Workspace	-	Matted
050417_GM_1003_PEM	Exceptional (iii)	PEM1	56.7	40.77216649	-75.44866326	Moore	Kunkletown	8	4	0.001	14	30	0.008	CL - Open Cut	-	Matted
050417_GM_1002_PEM	Exceptional (iii)	PEM1	56.7	40.77185129	-75.44842297	Moore	Kunkletown	74	41	0.050	37	30	0.028	CL - Open Cut	-	Matted
052218_WA_003_PEM	Exceptional (iii)	PEM1	58.5	40.75519164	-75.42301466	Moore	Kunkletown	37	45	0.031	42	30	0.027	CL - Open Cut	-	Matted
090414_DB_008_PEM	Exceptional (iii)	PEM1	59.2	40.74743972	-75.41359924	Moore	Catasauqua	54	45	0.043	37	30	0.025	CL - Open Cut	-	Matted
090314_DB_004_PEM	Exceptional (iii)	PEM1	60.6	40.73584165	-75.39266375	East Allen	Catasauqua	60	45	0.057	58	30	0.042	CL - Open Cut	-	Matted
041119_DHB_001_PEM	Exceptional (iii)	PEM1	62.8R3	40.725897	-75.356757	Upper Nazareth	Nazareth	226	75	0.231	208	30	0.143	CL - Open Cut	-	Matted
042815_JC_1003_PEM	Other	PEM1	64.3R2	40.71659923	-75.33413983	Lower Nazareth	Nazareth	37	32	0.017	-	-	-	N/A - Workspace	-	Matted
092614_GO_002_PFO - 1	Exceptional (iii)	PFO1	72.1	40.62836273	-75.27211446	Lower Saucon	Nazareth	159	45	0.125	86	30	0.058	CL - Open Cut	-	Matted
092614_GO_002_PFO - 2	Exceptional (iii)	PFO1	72.2	40.62795374	-75.2711996	Lower Saucon	Nazareth	50	30	0.021	10	7	0.001	CL - Open Cut	-	Matted
040318_WA_0001_PSS	Exceptional (iii)	PSS1	72.4	40.6260489	-75.26833137	Lower Saucon And Williams	Nazareth	115	45	0.099	61	30	0.047	CL - Open Cut	-	Matted

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040318_WA_0001_PEM	Exceptional (iii)	PEM1	72.4	40.62595254	-75.26815701	Lower Saucon And Williams	Nazareth	84	45	0.048	77	30	0.049	CL - Open Cut	-	Matted
031918_WA_001_PSS	Exceptional (iii, iv)	PSS1	72.4	40.62551994	-75.26736665	Williams	Nazareth	138	45	0.142	130	30	0.091	CL - Open Cut	-	Matted
051415_JC_1001_PEM	Exceptional (iii)	PEM1	72.6	40.62458873	-75.26535383	Williams	Hellertown	27	24	0.005	6	9	0.005	CL - Open Cut	-	Matted
012116_GM_1001_PFO	Exceptional (iii)	PFO1	72.6	40.62379209	-75.26407509	Williams	Hellertown	74	30	0.038	13	19	0.012	CL - Open Cut	-	Matted
042815_JC_1001_PFO - 1	Exceptional (iii)	PFO1	72.7	40.62261767	-75.26273278	Williams	Hellertown	56	10	0.005	18	8	0.002	N/A - Workspace	-	Matted
042815_JC_1001_PFO - 2	Exceptional (iii)	PFO1	72.8	40.62245052	-75.26238556	Williams	Hellertown	875	45	0.693	875	30	0.583	CL - Open Cut	-	Matted
031716_NJ_002_PSS - 1	Exceptional (iii)	PSS1	73.1	40.61916726	-75.25707384	Williams	Hellertown	90	15	0.022	14	17	0.013	CL - Open Cut	-	Matted
031716_NJ_002_PSS - 2	Exceptional (iii)	PSS1	73.2	40.61907126	-75.25684218	Williams	Hellertown	17	9	0.003	-	-	-	N/A - Workspace	-	Matted
031716_NJ_002_PEM	Exceptional (iii)	PEM1	73.1	40.61927021	-75.25809102	Williams	Hellertown	157	45	0.077	87	30	0.061	CL - Open Cut	-	Matted
042117_GM_1001_PFO	Exceptional (iii)	PFO1	73.6R2	40.6199795	-75.24910222	Williams	Riegelsville	65	45	0.055	62	30	0.043	CL - Open Cut	-	Matted
042418_WA_008_PFO	Exceptional (iii)	PFO1	73.6R2	40.61997843	-75.24796324	Williams	Riegelsville	75	45	0.068	77	30	0.053	CL - Open Cut	-	Matted
042418_WA_006_PFO	Exceptional (iii)	PFO1	73.7R2	40.61997695	-75.24640308	Williams	Riegelsville	97	43	0.062	58	30	0.037	CL - Open Cut	-	Matted
042518_WA_001_PSS	Other	PSS1	74.3	40.61232417	-75.23775408	Williams	Riegelsville	63	44	0.043	28	30	0.019	CL - Open Cut	-	Matted
072319_MU_1003_PEM	Other	PEM1	74.7	40.608359	-75.232975	Williams	Riegelsville	18	95	0.029	14	30	0.010	CL - Open Cut	-	Matted
062415_BT_1002_PEM	Exceptional (iii)	PEM1	74.9	40.60689675	-75.22906882	Williams	Riegelsville	93	45	0.059	78	30	0.050	CL - Open Cut	-	Matted
122016_LZ_1002_PEM	Other	PEM1	75.1	40.60620355	-75.22688624	Williams	Riegelsville	40	45	0.040	40	30	0.026	CL - Open Cut	-	Matted
042418_WA_001_PSS - 1	Other	PSS1	75.1	40.60600619	-75.22677179	Williams	Riegelsville	154	45	0.152	139	30	0.095	CL - Open Cut	-	Matted
042418_WA_001_PSS - 2	Other	PSS1	75.1	40.60542887	-75.22654157	Williams	Riegelsville	78	9	0.010	-	-	-	CL - Open Cut	-	Matted
042418_WA_001_PEM	Other	PEM1	75.1	40.6057504	-75.22673904	Williams	Riegelsville	9	2	0.001	-	-	-	N/A - Workspace	-	Matted
042418_WA_002_PSS	Exceptional (iii)	PSS1	75.1	40.60525809	-75.22633793	Williams	Riegelsville	41	45	0.028	9	30	0.010	CL - Open Cut	-	Matted

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042418_WA_002_PEM	Exceptional (iii)	PEM1	75.1	40.6052219	-75.22641588	Williams	Riegelsville	19	13	0.004	-	-	-	N/A - Workspace	-	Matted
042418_WA_003_PEM	Other	PEM1	75.2	40.60434284	-75.22580715	Williams	Riegelsville	113	45	0.093	107	30	0.072	CL - Open Cut	-	Matted
111314_JC_003_PFO	Exceptional (iii)	PFO1	75.7	40.6015552	-75.21879148	Williams	Riegelsville	56	15	0.013	23	10	0.003	N/A - Workspace	-	Matted
Access Roads																
081815_MK_042_PEM - 2	Exceptional (iii)	PEM1	55.9	40.78043338	-75.4568247	Moore	Kunkletown	105	29	0.068	-	-	-	-	-	Matted
TOTAL IMPACTS								**5,476**	**2,103**	**3.736**	**3,518**	**1,257**	**2.245**			

Notes:
1. In instances where a wetland is crossed by the proposed pipeline or workspace multiple times, crossing numbers (e.g. “-1”, “-2”) have been added to the Wetland ID.
2. Resource Value Definitions: Pennsylvania Exceptional Value Wetland as defined by PA Code §105.17 (relating to special criteria for projects affecting important wetlands). Criteria are:
(i) Serves as habitat for fauna or flora listed as ‘‘threatened’’ or ‘‘endangered”
(ii) Is hydrologically connected to or located within a 1/2-mile from habitat for fauna or flora listed as ‘‘threatened’’ or ‘‘endangered’’ and wetland dependent;
(iii) Located in or along the floodplain of the reach or tributaries of a wild trout stream or waters listed as exceptional value;
(iv) Located along an existing public or private drinking water supply.
3. Wetland Cover Type based on Cowardin, 1979
Key: PEM1 = palustrine emergent, persistent; PEM2 = palustrine emergent, non-persistent; PFO1 = palustrine forested, broad-leaved deciduous; PFO4 = palustrine forested, needle-leaved evergreen; PSS1 = palustrine scrub-shrub, broad-leaved deciduous; PSS3 = palustrine scrub-shrub, broad-leaved evergreen.
4. All route deviations implemented after the FERC Certificate Application are denoted with an "R" and indicate a MP equation. MPs with an "R1" indicate route deviations implemented and provided to FERC prior to the issuance of the DEIS. MPs with an "R2" indicate route deviations implemented as part of the September 2016 Route Update. MPs with an “R3 indicate route deviations implemented post-FERC Certificate issuance. All MPs without an "R" indicate that the route has not changed since the Certificate Application.
5. Sources: PennDOT Pennsylvania municipality boundaries, dated 1/2017 and PennDOT Pennsylvania county boundaries, dated 7/2018. Available at www.pasda.psu.edu.
6. Temporary crossing lengths are measured within the temporary workspace parallel to the pipeline or along the access road centerline. A “-“ denotes there are no impacts to the wetland within the temporary workspace.
7. Temporary crossing widths are measured within the temporary workspace perpendicular to the pipeline or access road centerline. A "-" denotes there are no impacts to the wetland within the temporary workspace.
8. Temporary impact acres are measured within the temporary workspace and additional temporary workspace; the measurement does not include acreages impacted within the permanent ROW. A “-“ denotes no impacts to the wetland.
9. Permanent crossing lengths are measured along the pipeline centerline, as applicable. In instance where the pipeline does not cross a wetland, the permanent crossing length was measured along the edge of the permanent ROW or permanent aboveground facility. A “-“ denotes there are no impacts to the wetland within the permanent ROW.
10. Permanent crossing widths are the width of the permanent workspace, as applicable. In instances where the full permanent workspace does not cross a wetland the permanent crossing width was measured at the widest point of the wetland that intersected the permament workspace.
11. Permanent impact acres are measured within the permanent ROW or within an aboveground facility footprint. For HDDs and bores, the permanent impact is calculated as the length of the crossing times the pipe diameter. A “-“ denotes no impacts to the watercourse or floodway, as applicable.
12. Crossing Type Key for Wetlands:
• CL-Bore = Pipeline centerline crosses under wetland. Construction method is bore.
• CL-HDD = Pipeline centerline crosses under wetland. Construction method is HDD.
• CL-Open Cut = Pipeline centerline impacts wetland. Construction method is open cut.
• Matted = Wetland will be matted for temporary equipment crossing.
• N/A = Not affected by pipeline construction.
• N/A-Workspace = Pipeline trench does not impact wetland.
• “-“ = No alternative construction method is proposed.