

Aquatic Resources Impact Table  
Wetland Resources  
Northampton County

Identification			Location					Wetland Temp Impacts		Wetland Perm Impacts			Crossing Information		
Wetland ID and Crossing Number <sup>1</sup>	State Wetland Classification <sup>2</sup>	Cowardin Classification <sup>3</sup>	Milepost <sup>4</sup>	Latitude	Longitude	Municipality <sup>5</sup>	Quadrangle	Temporary Crossing Length (feet) <sup>6</sup>	Temporary Impact Area (acres) <sup>7</sup>	Permanent Crossing Length (feet) <sup>8</sup>	Permanent Impact Area (acres) <sup>9</sup>	Conversion Area in 30-ft Maintained ROW (acres) <sup>10</sup>	Primary Pipeline Crossing Method <sup>11</sup>	Secondary Pipeline Crossing Method <sup>11</sup>	Temporary Equipment Crossing <sup>11</sup>
PennEast Mainline Pipeline															
040517_GM_1001_PFO	Other	PFO1	52.4R3	40.804727	-75.473003	Moore Twp	Kunkletown	10	0.01	40	0.03	0.03	CL - Open Cut	-	Matted
040517_GM_1001_PEM	Other	PEM1	52.4R3	40.804673	-75.472930	Moore Twp	Kunkletown	7	0.00	4	0.00	-	N/A - Workspace	-	Matted
040617_GM_1001_PFO	Exceptional (iii)	PFO1	52.5R3	40.804172	-75.473033	Moore Twp	Kunkletown	93	0.01	50	0.05	0.03	CL - Open Cut	-	Matted
040617_GM_1001_PEM	Exceptional (iii)	PEM1	52.5R3	40.804035	-75.472952	Moore Twp	Kunkletown	6	0.00	5	0.00	0.00	N/A - Workspace	-	Matted
052918_WA_004_PFO	Exceptional (ii, iii)	PFO1	52.5R3	40.803757	-75.473036	Moore Twp	Kunkletown	66	0.02	69	0.05	0.03	CL - Open Cut	-	Matted
052918_WA_005_PEM	Exceptional (ii, iii)	PEM1	52.5R3	40.802981	-75.473041	Moore Twp	Kunkletown	-	-	6	0.01	0.01	CL - Open Cut	-	Matted
052918_WA_003_PFO	Exceptional (ii, iii)	PFO1	52.5R3	40.802869	-75.473042	Moore Twp	Kunkletown	105	0.04	87	0.08	0.05	CL - Open Cut	-	Matted
052918_WA_007_PUB	Exceptional (ii, iii)	PEM2	52.6R3	40.802353	-75.473375	Moore Twp	Kunkletown	53	0.03	53	0.02	0.01	N/A - Workspace	-	Matted
052918_WA_008_PUB	Exceptional (ii, iii)	PEM2	52.6R3	40.802223	-75.473325	Moore Twp	Kunkletown	37	0.00	17	0.02	0.01	CL - Open Cut	-	Matted
080917_WA_003_PEM	Exceptional (ii, iii)	PEM1	52.7R3	40.800823	-75.473953	Moore Twp	Kunkletown	23	0.01	13	0.01	0.01	CL - Open Cut	-	Matted
080917_WA_002_PEM - 1	Exceptional (i, iii)	PEM1	52.7R3	40.800562	-75.474071	Moore Twp	Kunkletown	12	0.01	4	0.01	0.00	N/A - Workspace	-	Matted
080917_WA_002_PEM - 2	Exceptional (i, iii)	PEM1	52.7R3	40.800190	-75.474300	Moore Twp	Kunkletown	-	-	22	0.04	0.01	CL - Open Cut	-	Matted
080917_WA_002_PSS	Exceptional (i, iii)	PSS1	52.8R3	40.799653	-75.474566	Moore Twp	Kunkletown	-	-	16	0.04	0.01	CL - Open Cut	-	Matted
110217_WA_005_PFO - 1	Exceptional (i, iii)	PFO1	52.9R3	40.798544	-75.474989	Moore Twp	Kunkletown	69	0.03	55	0.04	0.03	CL - Open Cut	-	Matted
110217_WA_005_PFO - 2	Exceptional (i, iii)	PFO1	52.9R3	40.798072	-75.475260	Moore Twp	Kunkletown	-	-	87	0.02	0.00	CL - Open Cut	-	Matted

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110217_WA_005_PFO - 3	Exceptional (i, iii)	PFO1	52.9R3	40.797778	-75.475401	Moore Twp	Kunkletown	-	-	87	0.02	0.00	N/A - Workspace	-	Matted
110217_WA_006_PEM	Exceptional (ii, iii)	PEM1	52.9R3	40.797669	-75.475216	Moore Twp	Kunkletown	-	-	43	0.01	0.00	N/A - Workspace	-	Matted
110217_WA_008_PEM	Other	PEM1	53.1R3	40.795645	-75.476254	Moore Twp	Kunkletown	-	-	7	0.01	0.01	CL - Bore	CL - Open Cut	Matted
080917_WA_001_PEM - 1	Exceptional (iii)	PEM1	53.2R3	40.793819	-75.476184	Moore Twp	Kunkletown	77	0.01	9	0.02	0.01	CL - Open Cut	-	Matted
080917_WA_001_PEM - 2	Exceptional (iii)	PEM1	53.3R3	40.792700	-75.475975	Moore Twp	Kunkletown	92	0.08	154	0.16	0.10	CL - Open Cut	-	Matted
050217_MB_1002_PEM	Exceptional (iii)	PEM1	53.3R3	40.792094	-75.476108	Moore Twp	Kunkletown	14	0.00	11	0.01	0.01	CL - Open Cut	-	Matted
050217_MB_1004_PFO	Exceptional (iii)	PFO1	53.4R3	40.791397	-75.476161	Moore Twp	Kunkletown	-	-	5	0.00	0.00	N/A - Workspace	-	Matted
050217_MB_1001_PEM	Exceptional (iii)	PEM1	53.4R3	40.790966	-75.475846	Moore Twp	Kunkletown	49	0.03	44	0.04	0.03	CL - Open Cut	-	Matted
081815_MK_042_PEM - 1	Exceptional (iii)	PEM1	55.9	40.780070	-75.457070	Moore Twp	Kunkletown	109	0.05	53	0.06	0.04	CL - Bore	CL - Open Cut	Matted
062218_WA_001_PFO	Exceptional (iii)	PFO1	56	40.779828	-75.456993	Moore Twp	Kunkletown	396	0.44	340	0.37	0.22	CL - Open Cut	-	Matted
062218_WA_001_PEM - 1	Exceptional (iii)	PEM1	56	40.779732	-75.456763	Moore Twp	Kunkletown	99	0.13	64	0.01	-	N/A - Workspace	-	Matted
062218_WA_001_PEM - 2	Exceptional (iii)	PEM1	56	40.779378	-75.456448	Moore Twp	Kunkletown	80	0.02	64	-	-	N/A - Workspace	-	Matted
052218_WA_002_PEM	Exceptional (iii)	PEM1	56.6	40.772600	-75.448817	Moore Twp	Kunkletown	62	0.01	-	-	-	N/A - Workspace	-	Matted
101717_AB_1001_PEM	Exceptional (iii)	PEM1	56.6	40.772464	-75.448984	Moore Twp	Kunkletown	-	-	1	0.00	-	N/A - Workspace	-	Matted
050417_GM_1003_PEM	Exceptional (iii)	PEM1	56.7	40.772166	-75.448663	Moore Twp	Kunkletown	-	-	14	0.01	0.01	CL - Open Cut	-	Matted

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050417_GM_1002_PEM	Exceptional (iii)	PEM1	56.7	40.771851	-75.448423	Moore Twp	Kunkletown	67	0.03	36	0.05	0.03	CL - Open Cut	-	Matted
052218_WA_003_PEM	Exceptional (iii)	PEM1	58.5	40.755192	-75.423015	Moore Twp	Kunkletown	26	0.02	41	0.04	0.03	CL - Open Cut	-	Matted
090414_DB_008_PEM	Exceptional (iii)	PEM1	59.2	40.747440	-75.413599	Moore Twp	Catasauqua	54	0.03	36	0.04	0.02	CL - Open Cut	-	Matted
090314_DB_004_PEM	Exceptional (iii)	PEM1	60.6	40.735842	-75.392664	East Allen Twp	Catasauqua	52	0.03	56	0.07	0.04	CL - Open Cut	-	Matted
042815_JC_1003_PEM	Other	PEM1	64.3R2	40.716599	-75.334140	Upper Nazareth Twp	Nazareth	38	0.02	12	0.00	-	N/A - Workspace	-	Matted
092614_GO_002_PFO - 1	Exceptional (iii)	PFO1	72.1	40.628363	-75.272114	Lower Saucon Twp	Nazareth	49	0.08	84	0.11	0.06	CL - Open Cut	-	Matted
092614_GO_002_PFO - 2	Exceptional (iii)	PFO1	72.2	40.627954	-75.271200	Lower Saucon Twp	Nazareth	20	0.02	131	0.00	0.00	CL - Open Cut	-	Matted
040318_WA_0001_PSS	Exceptional (iii)	PSS1	72.4	40.626049	-75.268331	Lower Saucon Twp	Nazareth	115	0.06	60	0.09	0.05	CL - Open Cut	-	Matted
040318_WA_0001_PEM	Exceptional (iii)	PEM1	72.4	40.625953	-75.268157	Lower Saucon Twp	Nazareth	85	0.02	76	0.08	0.05	CL - Open Cut	-	Matted
031918_WA_001_PSS	Exceptional (iii, iv)	PSS1	72.4	40.625520	-75.267367	Lower Saucon Twp	Nazareth	151	0.08	130	0.15	0.09	CL - Open Cut	-	Matted
051415_JC_1001_PEM	Exceptional (iii)	PEM1	72.6	40.624589	-75.265354	Williams Twp	Hellertown	-	-	6	0.01	0.01	CL - Open Cut	-	Matted
012116_GM_1001_PFO	Exceptional (iii)	PFO1	72.6	40.623792	-75.264075	Williams Twp	Hellertown	59	0.03	72	0.02	0.01	CL - Open Cut	-	Matted
042815_JC_1001_PFO - 1	Exceptional (iii)	PFO1	72.7	40.622618	-75.262733	Williams Twp	Hellertown	221	0.00	656	0.00	0.00	N/A - Workspace	-	Matted
042815_JC_1001_PFO - 2	Exceptional (iii)	PFO1	72.8	40.622451	-75.262386	Williams Twp	Hellertown	660	0.34	873	0.93	0.58	CL - Open Cut	-	Matted
031716_NJ_002_PSS - 1	Exceptional (iii)	PSS1	73.1	40.619167	-75.257074	Williams Twp	Hellertown	91	0.01	13	0.03	0.01	CL - Open Cut	-	Matted
031716_NJ_002_PSS - 2	Exceptional (iii)	PSS1	73.2	40.619071	-75.256842	Williams Twp	Hellertown	17	0.00	83	0.00	-	N/A - Workspace	-	Matted

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031716_NJ_002_PEM	Exceptional (iii)	PEM1	73.1	40.619270	-75.258091	Williams Twp	Hellertown	157	0.03	86	0.10	0.06	CL - Open Cut	-	Matted
042117_GM_1001_PFO	Exceptional (iii)	PFO1	73.6R2	40.619980	-75.249102	Williams Twp	Riegelsville	59	0.03	62	0.07	0.04	CL - Open Cut	-	Matted
042418_WA_008_PFO	Exceptional (iii)	PFO1	73.6R2	40.619978	-75.247963	Williams Twp	Riegelsville	72	0.03	77	0.09	0.05	CL - Open Cut	-	Matted
042418_WA_006_PFO	Exceptional (iii)	PFO1	73.7R2	40.619977	-75.246403	Williams Twp	Riegelsville	90	0.03	57	0.06	0.04	CL - Open Cut	-	Matted
042518_WA_001_PSS	Other	PSS1	74.3	40.612324	-75.237754	Williams Twp	Riegelsville	59	0.03	27	0.03	0.02	CL - Open Cut	-	Matted
062415_BT_1002_PEM	Exceptional (iii)	PEM1	74.9	40.606897	-75.229069	Williams Twp	Riegelsville	93	0.02	77	0.09	0.05	CL - Open Cut	-	Matted
122016_LZ_1002_PEM	Other	PEM1	75.1	40.606204	-75.226886	Williams Twp	Riegelsville	50	0.02	37	0.05	0.03	CL - Open Cut	-	Matted
042418_WA_001_PSS - 1	Other	PSS1	75.1	40.606006	-75.226772	Williams Twp	Riegelsville	114	0.09	139	0.16	0.10	CL - Open Cut	-	Matted
042418_WA_001_PSS - 2	Other	PSS1	75.1	40.605429	-75.226542	Williams Twp	Riegelsville	77	0.01	160	0.00	-	CL - Open Cut	-	Matted
042418_WA_001_PEM	Other	PEM1	75.1	40.605750	-75.226739	Williams Twp	Riegelsville	9	0.00	-	-	-	N/A - Workspace	-	Matted
042418_WA_002_PSS	Exceptional (iii)	PSS1	75.1	40.605258	-75.226338	Williams Twp	Riegelsville	25	0.02	34	0.02	0.01	CL - Open Cut	-	Matted
042418_WA_002_PEM	Exceptional (iii)	PEM1	75.1	40.605222	-75.226416	Williams Twp	Riegelsville	19	0.00	19	0.00	-	N/A - Workspace	-	Matted
042418_WA_003_PEM	Other	PEM1	75.2	40.604343	-75.225807	Williams Twp	Riegelsville	112	0.05	108	0.11	0.07	CL - Open Cut	-	Matted
111314_JC_003_PFO	Exceptional (iii)	PFO1	75.7	40.601555	-75.218791	Williams Twp	Riegelsville	57	0.01	46	0.01	0.00	N/A - Workspace	-	Matted
Access Roads															
081815_MK_042_PEM - 2	Exceptional (iii)	PEM1	55.9	40.780433	-75.456825	Bear Creek Twp	Kunkletown	105	0.07	-	-	-	-	-	Matted

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Notes:

- 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.
- 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:
  - Serves as habitat for fauna or flora listed as "threatened" or "endangered"
  - 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;
  - Located in or along the floodplain of the reach or tributaries of a wild trout stream or waters listed as exceptional value;
  - Located along an existing public or private drinking water supply.
- 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.
- 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.
- Sources: PennDOT Pennsylvania municipality boundaries, dated 1/2017 and PennDOT Pennsylvania county boundaries, dated 7/2018. Available at [www.pasda.psu.edu](http://www.pasda.psu.edu).
- 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.
- Temporary impact acres are measured within the temporary workspace and additional temporary workspace; the measurement does not include acreages impacted within the 50' permanent ROW. A value of 0.00 denotes impact acreages less than 0.005 acres. A "-" denotes no impacts to the wetland.
- 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 50' permanent ROW or permanent aboveground facility. A "-" denotes there are no impacts to the wetland within the permanent ROW.
- Permanent impact acres are measured within the 50' 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 value of 0.00 denotes impact acreages less than 0.005 acres. A "-" denotes no impacts to the watercourse or floodway, as applicable.
- A 30' wide ROW will be maintained through PFO and PSS wetlands, resulting in the conversion of PFO and PSS to PEM wetlands.
- 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.